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## EDITORIAL

### MORALS AND VENEREAL DISEASES.

Considerable notoriety has attached to New Orleans recently because of undue publicity in the work of government investigators, who appear to have run counter to the municipal authorities. The conditions in New Orleans are not exceptional, notwithstanding the unsavory interchange of controversial newspaper publications from those concerned. The same sort of investigation has gone on elsewhere, even before the war, and both New York and Chicago have been fully advertised in the particulars of the variety and extent of their wicked ways.

New Orleans has always been different from many cities in its attitude to this particular phase of vice. Its segregated district was for years so open that everybody knew it and, through certain misguided ideas of compensatory moral judgment, the district was condoned.

Like all other places, when the War Department regulations found our open prostitution, the clandestine methods obtained, and in New Orleans, as elsewhere, it will be a long time before the evil is stopped, if it is ever stopped.

It is unfortunate that the efforts of the Federal investigators should have met with any antagonism from the municipal authorities, but it is not evident, at the same time, that there has been any strong move on either side to establish a friendly coöperation. There may be some ground for criticism on both sides. In other places where the United States Public Health Service operated during the war the authorities were in rather close sympathy with what was being done, and all means were used to restrict vice. On the other hand, the supererogation of the Federal investigators of an authority which placed the medical profession on the plane of bad children, surely did not inspire the physician, nor did it invoke the best in him for good work. The best results will only be reached when an entire community is concerted in effort; surely not when those who are responsible develop contrary forces in a community, which is thereby divided against itself.

The element in any community which is suborned to vice should be negligible in a crusade for a sane city, and it is not fair to estimate the *morale* of a public upon the exposure of a discredited minority. It must rest upon the majority, however, to make that discrediting complete. New Orleans is no better and no worse than other large cities. It needs to realize, however, that it has the same problems as other cities, and if the efforts of government employees have, by their method, proven unwelcome and are objectionable, the city authorities and the people themselves should organize to make the city clean. There is enough of the proper spirit in the city, and it should only need to be awakened to get the right result.

The whole problem of venereal disease control is a public health question and it has many ramifications. The provision for clinics for venereal diseases, suggested by us over a year ago, has already started, and may be further extended. Some cities have even estab-

lished stations where prophylaxis after sex contact may be obtained, and the hospitals themselves are beginning to provide for venereal diseases, when formerly these were excluded for indoor care.

Prostitution is just a phase of the question. Even if groups of women, or houses harboring such, are done away with, venereal diseases will only be checked in so far as the trade of prostitution has been restricted. It may be a safe conjecture that most cases of venereal disease among white subjects arise from contacts which were not originated in houses of prostitution, and even rigid laws will not stop irregular sex relations. The laws requiring report of such cases will do this much good: it will establish far better treatment than has heretofore obtained, but it will *not* prevent the contacts. It will reduce the number of cases of venereal disease, but it will not reduce the number of exposures to likely infection.

We shall probably never have a written or published story of the prevalence of immorality in our army and navy. It is perhaps best unwritten, but we must heed some of the stories told by the men themselves, both at home and abroad. The people who live in the towns nearby army cantonments have much to say on this question, and it is not flattering. What conditions might have been without the religious and moral influences of the Y. M. C. A., the Red Cross and the Knights of Columbus, it is frightful to contemplate. The story is not new to such aggregations of sturdy men, released from vigorous discipline now and then. Deductions have been drawn, and they lead to the same conclusions, whenever the question is debated, namely, that so long as the moral laws for men and women are different, the male instinct will prevail at the expense of woman.

It is a difficult problem—one too difficult to be overcome either by laws or by terrorism. The male differs from the female in all animal life, and the human is no exception. The education of the growing youth may bring salutary influence so as to protect coming generations, but such education must be organized and must begin with the parents, so that they may realize the need of such teaching to their children. It is too late when children go to school, and the teachers in the schools are not sufficiently intimate with children to undertake this education as it should be given.

In this age of luxury, where, in dress and in habit, the young girl is sophisticated before her time, so far as worldly things go, and where the deference to sex, which obtained a generation ago, has

entirely passed, because of woman's assumption of man's place in all things, it must be the task of women to protect their own kind.

The public press no longer hesitates to print scandalous news in plain terms; the works of fiction are filled with sex problems, and it is certain that these have not yet proven of value in reform; so far, they rather cater to the prurient than serve as moral staffs of strength.

The psychology of the times points to a real desire for better things, but, just now, we seem to be struggling in a morass of doubt, in which all efforts seem to move in a circle, now and then doing good, but with an outbreak of some new morbid issue as a reaction.

Organized vice is no longer hydra-headed. Prohibition has removed much of its incentive, and the constituted efforts of law and order have driven its exponents into close hiding. Public morals are elastic and are moulded by public habit and by public opinion. Good women and good men are needed now more than ever to think over the status of their children and of their children's children. Influence, rather than control, must weigh in casting the model for a future integrity. Girls must not only be safeguarded at home, but they should not parade the streets to invite the contact with the shadows of vice, which are only too prevalent in these times of luxurious waste. The responsibility for the future of the child must rest with the parent, and to-day the young American boy and girl are too free to go and to do as they please—and long before they are strong enough to meet the temptations which lurk in their paths.

We may continue to legislate and to investigate, and we may succeed in destroying the grosser evidences of vice—but until the foundation of a higher morality, public and individual, is established, we may not hope for the cure of the evils now combatted.

## ORIGINAL ARTICLES

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. Reprints may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

# A PLEA FOR THE MORE CAREFUL EXAMINATION OF THE URINE IN SUSPECTED URINOLOGICAL CONDITIONS.*

By H. W. E. WALTHER, M. D., New Orleans.

There is an old saying that it is the little things in life that count. Many procedures which some designate as "little things" in diagnosis could not well be dispensed with. Not the least among these is urinalysis. Yet, to get the most value out of a report on the analysis of a specimen of urine, it must be known in what manner the specimen was collected. This applies particularly to urines obtained from females. What will be said here is not new. Urologists and laboratory workers have long known this, but the profession generally has not awakened to the necessity of laying sufficient stress upon this all-important subject. My personal case records tend to show that this matter holds little interest for the average physician. Until we awaken from this apparent lethargy we can expect many incorrect diagnoses being made in suspected infections of the kidneys, ureters and bladder of the female.

My article might be summed up in a single sentence. That is this: Unless a specimen has been collected from the female aseptically by drawing off the urine from the bladder by direct means of a sterile catheter, the findings are worthless. The *rationale* of the thing should be obvious to all. And yet the proportion of voided specimens studied as compared to those catheterized can, I venture to say, be safely placed at the ratio of one hundred to one.

Now, it has long been an established fact that it is next to impossible to render the vagina and the external genitalia in the female absolutely sterile. The proportion of women with some degree of leucorrhea is very large. Smegma and other saprophytic bacteria normally inhabit the folds of the genitalia. And, even with mechanical cleansing of the parts as a preliminary to voiding, the urethra may still harbor bacteria and pus which, when admixed with the urine, may lead the examiner astray.

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

As arguments can best be elucidated by facts, the following three typical case history reports, briefly stated, will illustrate the point in question:

**Case 1** was a female twenty-nine years old, referred to me for cystoscopic examination. She complained of a pain in her right side which had persisted for twenty-four hours. Five years previous the patient had a right nephropexy done. Her present pain was non-radiating in character; there was some urinary frequency; no burning; no hematuria; no fever. No tenderness in either loin. Voided specimens of urine had been reported as containing pus and bacteria. At cystoscopy a specimen from bladder was collected by catheter and separate urines from kidneys were collected with ureteral catheters. Bladder and ureteral examination normal. All urines normal. Her pain disappeared in a few days and patient left hospital.

**Case 2** was a female thirty-two years old, referred to me for cystoscopy. Her doctor suspected renal tuberculosis. The patient complained of left-sided pain and urinary frequency—a condition which had been present intermittently over a period of nine years. Patient stated that she had lost fifteen pounds in weight within the past year. For past five days pains in left side had been most severe; she felt feverish at times; there was no frequency; no burning; no hematuria. Appetite good; sleeps well; bowels chronically constipated. Voided specimens of urine had always shown pus. At cystoscopy bladder was catheterized; then double ureteral catheterization done through cystoscope. All urines normal.

**Case 3** was a little girl four and one-half years old, referred to me by a physician with request that I do a cystoscopic examination. The complaint was "bladder trouble," accompanied by some urinary frequency. One year previously child had fallen down, striking on her left side, for which injury she was confined to bed for some weeks. An orthopedist had examined the case for hip trouble because of stiffness in left side and left leg. He reported negative for joint trouble. Urine did not burn patient; there was no fever. Voided specimens only had been examined and all had been found containing pus cells. At cystoscopy, which was performed under nitrous oxide anesthesia, an 8 F. catheter was passed and bladder urine collected for study. After dilating urethra an 18 F. cystoscope was easily introduced and ureters catheterized. Cystoscopy negative; all urines normal.

It is not necessary to continue this list *ad infinitum,* although many more such experiences, seen within the last year, could be related. Do these case records teach anything? They show, at least to my way of thinking, that we are not doing all we might for our female cases if, in cases of suspected urinary infection, we persistently ignore the correct and only scientific means of urine collections and study.

From what has been said it should not be concluded that there is any intention of in any way minimizing the importance of thor-

oughly examining the urinary tract with the aid of the cystoscope, ureteral catheter, etc. The value of such examinations has long since been firmly established. The pity is that they are not used more frequently in true urinary infections, so as to more definitely and accurately establish a diagnosis. But to request such examinations in cases in which no study or, at best, a poor, unscientific study of the urine has been made, is not doing justice by the patient.

It is almost with an air of apology that the writer presents an entire article on what seems at first glance so trivial a matter. But because of our ever-expanding interest in better work, which inevitably leads to better results, the subject is considered of sufficient importance to bring to your attention.

In conclusion, I will but reiterate the slogan: That only catheterized specimens of urine from females should be considered worthy of microscopic examination in suspected infections of the urinary tract.

## DISCUSSION OF DR. WALTHER'S PAPER.

**Dr. A. Nelken,** New Orleans: All who do urological work appreciate the importance of getting a good specimen from the female. My experience is that when patients are referred for cystoscopic examination the voided urine usually contains pus washed out of the vagina. Most people think the catheterization of female children an especially difficult proposition, but there is no reason why the female baby should not be catheterized as well as the adult female. Only when that is done are we in position to form conclusions from our examination, because we do see vaginal discharges sometimes even in very young girl children.

**Dr. H. W. E. Walther** (closing): I want to thank Dr. Nelken for his discussion of the main part of my paper—the child part. There is no reason why children cannot be catheterized or why they should not be cystoscoped. There seems to be a misunderstanding, even among pediatrists—some think they are too little to have this done. Our instruments are not as small as we would like to have them, but we make out very well and we do not injure the patients.

The word "altruism" has been brought out in one or two papers in this meeting. I appeal to you gentlemen from the smaller communities not to send your cases in to us until you give them more serious and careful study. You will save your patients a great deal of money and trouble by studying them more carefully. A great many of these people are not endowed with much worldly goods, and, while it is taking money out of our pockets, for the good of humanity I want to bring this point before you—that in these cases you study them carefully. We will not then get cases we should not get, and we will not be subjecting people to cystoscopy where it is not needed. If any of you have ever been cystoscoped you do not care to have the procedure repeated, so why subject your patients to unnecessary examination?

## PNEUMONIA THERAPY, WITH SPECIAL REFERENCE TO INFLUENZA BRONCHO-PNEUMONIA.*

By ARTHUR A. HEROLD, M. D., Shreveport, La.

There is no subject, I feel sure, which would serve to recall more anxious days of the past six months than the one which I have chosen. The question of how best to treat the so-called broncho-pneumonia of influenza has, for the present at least, replaced discussions on quinin in malaria hematuria and on the etiology and treatment of pellagra. But before beginning to analyze the therapeutic measures at our disposal in this dreaded disease let me stress the point that, in the treatment of pneumonia probably more than in anything else, we must treat the *patient* rather than the disease. Each case requires individualizing, and no set therapy that obtains good results in one case will necessarily do as well in another.

The author presented a paper before this Society at its New Orleans session in 1909 entitled "Indications for Digitalis in Pneumonia," in which he cited cases and made a plea for the use of this drug *before* cardiac failure is imminent, when, as we all know, it is too late to obtain its therapeutic value; at that time I had reference especially to lobar pneumonia. What I said then still holds good; furthermore, the late epidemic taught us, I feel, that the early, energetic, but careful use of digitalis is a decided aid in these broncho-pneumonias. Often we might call it a sheet-anchor, for, with the heart thus fortified, the battle is half won, but not entirely, for in many cases, in spite of our efforts, toxemia gets the upper hand and cardiac failure ensues, without mechanical dilatation. However, tone up the circulation, brace up the heart muscle by improved nutrition (direct result of digitalis medication), and your patient has something much more substantial to fall back upon than if you should ignore this remedy.

Generally speaking, the outline for the treatment of penumonia is absolute rest in bed, substantial, easily-digested food, keeping all the excretions active, and watching the circulatory apparatus. Some cases require sedatives, which should be given cautiously; some need expectorants, while others show indications for alkaline and carbohydrate therapy for acidosis.

To come to our main point, viz: so-called influenza broncho-pneumonia, a disease which was undoubtedly more prevalent than

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diagnosed, there are special indications to be met which tax the resources of the attending physician to the utmost. Christian, of Boston, and Riesman, of Philadelphia, maintain that all severe, protracted influenza cases are really pneumonias, unrecognized in many instances, as proven by careful physical examinations and autopsy findings. All of us who saw many cases during the rushes of the late epidemic will agree with these claims; therefore every pronounced case of influenza should be treated as a broncho-pneumonia. The patient should be put to bed and kept warm in a well-ventilated but not too draughty room, given an initial laxative and an alkaline diuretic (sodium of potassium citrate or the alkaline mixture of spirits of ammoni, aromatic liquid ammoni acetatis, and liquid potass. citratis) for the headache; small doses of acetphenitidin, with or without codein, combined with camphor or some other diffusible stimulant, are useful, and certainly not harmful, unless used to excess. If the pulse rate is over 100 or irregular, or blood pressure below 110 (in adults), I begin tincture of digitalis in 10 or 15 minim (not drop) doses every six hours, later increasing or reducing dose, as per indications. If we see the case early, counter-irritation of chest with mustard or strong turpentine poultice (if kidneys are normal) is useful, but in advanced cases I believe this procedure is energy wasted. For the fever, some tolerate ice bag to head, but others it chills so rapidly that it has to be dispensed with. For hyperpyrexia, cool enemata or hot packs probably give the most rapid relief.

For the thick, putrid expectoration, carbonate of creosote or one of the many creosote preparations on the market may be used. In advanced cases, with bronchorrea, atropin may have to be used, to prevent "drowning"; it should be used early in this emergency, in small doses, withholding it too long often rendering it useless. Opiates, as a rule, should not be exhibited, but some cases show a happy improvement after small doses, especially Dover's powder with a laxative. While bromides or one of the mild chloral preparations are to be preferred where a sedative becomes necessary, resort to opiates to obtain rest is sometimes advisable, in which cases a small dose of codein of heroin often suffices. Blood-letting and oxygen inhalations in this disease are, in the opinion of the writer useless.

A paper on pneumonia therapy would be incomplete, indeed, without a discussion of the use of the sera and vaccines in this

disease. The literature has been heavy, of late, with references to the serum treatment of pneumonia, but especially so with articles regarding identifying the type of pneumococcus we are dealing with. The work of Cole and others at Rockefeller Institute, while holding out great hope, has not as yet borne the fruit which we had expected about two years ago. A recent paper of Prof. Johns, of Tulane, in reference to identifying the type of organism that we are dealing with, explains:

> "The drawback comes in the large number of Type IV infections seen in broncho-pneumonia, and against which type a serum is not practicable, owing to the large number of strains comprising the group."

The so-called "polyvalent" antipneumococcic sera on the market sometimes yield brilliant results in lobar pneumonia, and this is said to obtain when we are dealing with Type I only. These preparations are of absolutely no value in influenza broncho-pneumonia, even the combined, as has been advised, with antistreptococcic serum. Recently work has been done, in extreme cases, with human serum from recovered patients, and also with direct transfusion from convalescents. The results have been good enough to warrant a continuance of this kind of therapy, but, it seems to me, our greatest hope should be in getting a horse serum which would prove effectual and which, of course, could be obtained in sufficient quantities to "go around."

As to the vaccins, we should not expect results from them during the acute stage, but in those cases of influenza broncho-pneumonia that subside by very slow lysis, autogenous vaccins have proven helpful in my hands. I believe, too, that I have seen some beneficial results from the use of sensitized mixed stock vaccins during the acute attack, but when we realize that there is no unanimity of opinion as to the causative agent in this influenza epidemic (and therefore, too, in these broncho-pneumonias) we are in this, to some extent at least, groping in the dark, so that if we feel that good results are obtained in any cases from stock vaccins we should be mindful of the possibilities of non-specific vaccin therapy. To date, Rosenow's preparation seems the most rational, containing organisms most frequently found in the recent outbreak.

A patient who has had a well-marked pneumonia should be kept in bed for at least a week after subsidence of acute symptoms. A careful examination of lungs, heart and kidneys should be made

before he is dismissed, and he should be warned if any evidence of aftermaths exists.

In this paper I have not attempted any long dissertation on this ever-important subject, but I have tried to deal as briefly as possible with how best to fight our troublesome enemy of the past fall and winter, realizing that pneumonia and epidemic influenza are so closely intertwined, feeling that by thus broaching the matter many of you will be given an opportunity of informing us as to what therapeutic means and measures you think best to pursue.

## DISCUSSION OF DR. HEROLD'S PAPER.

**Dr. C. M. Tucker,** Haughton: In all of our bad cases of influenza, such as we have had this year, each one was treated as a broncho-pneumonia to start with. There has been such a small line drawn between bronchitis and broncho-pneumonia as we have had it this winter that I want to emphasize that we should treat them primarily as cases of broncho-pneumonia.

**Dr. E. M. Ellis,** Crowley: There is one point I wish to emphasize. During the last epidemic we all know our experiences in treating influenza pneumonia were very unsatisfactory. I wish to lay emphasis on the serum treatment in connection with the very severe cases I was called in to see. One case seemed hopelessly ill, but, as we had been very unsuccessful with our methods, we decided to use every means available. About that time the report came from Camp Sherman of twenty-five cases having been treated by the serum of the convalescent patient, and we determined to try this; but we could not find any one who was convalescent from pneumonia; our pneumonia patients were all dead, so we could not get the serum. But we took the matter up with Dr. Eshleman in New Orleans and he secured the serum there from a convalescent nurse in Touro Infirmary. He sent six ounces of serum. When we began to use this serum she had a pulse of 160 and was cyanotic. We gave her three ounces of this serum, and in six or eight hours she showed improvement. In fourteen hours we gave her the other three ounces and she made an uneventful recovery.

**Dr. Allan C. Eustis,** New Orleans: Most of us received our medical education under Dr. John B. Elliott, Sr., and he used to talk about a condition known as "capillary bronchitis." Latterly we have been taught that capillary bronchitis was broncho-pneumonia. This epidemic we have just gone through is entirely different from the broncho-pneumonias we are wont to see due to pneumococcic infection, and it seems to me the former might be called capillary bronchitis—where the patients are drowned in their own secretions in twenty-four hours. You will never learn this in your text-books, but I think we should bear this in mind. It is an acute inflammatory condition of the minute bronchi, a condition which we have been overlooking.

**Dr. A. A. Herold** (closing): I have nothing further to add, except that Dr. Eustis brought out the point of this being a capillary bronchitis. I was careful to say so-called "broncho-pneumonia." Some one has suggested the name of "bronchiolitis."

## EPIDEMIC MENINGITIS FROM A CONTROL STANDPOINT.*

By W. H. SEEMANN, M. D., New Orleans.

The endemicity of cerebrospinal meningitis is subject to considerable variation. At times we are confronted, especially in smaller communities, with outbreaks that threaten to become general, and at other times there are practically no cases present. Ordinarily in the winter months we find a more or less consistent increase in the occurrence of this disease.

During the winter just passed I have been impressed with the comparatively small number of cases reported of this, as well as other similarly transmitted diseases, with the great exception of influenza, which we all know swept the world with terrible consequences.

It is hard to explain how the great outbreaks of 1917-18 have been followed by a comparative lull in this disease in the army camps, because there has been a constant new supply of potential victims. Possibly the lessons learned from the first outbreak have served to lessen the subsequent loopholes, and the improvement may thus be explained. Still, in civilian communities, where these arguments would not hold with the same force, we find years of great outbreaks coming suddenly, after years of comparative absence of the disease; thus the great outbreak in New York in 1904-05 and in Texas in 1912 stand as awe-inspiring examples.

We all know, as demonstrated by many investigations, that meningococci infect the nose, pharynx and tonsils of many otherwise healthy individuals; in fact, the percentage of healthy carriers found varies from one-half to 50 per cent, as reported by various persons in their individual investigations. The class of individuals who, though apparently well, harbor in themselves germs of disease, potentially virulent, are popularly in medical literature called "carriers."

We recognize different types of "carriers." The acute or accidental carrier is one who, though insusceptible to the continued growth of meningococci, having been exposed to contact with the germs, affords them temporary harborage. Chronic carriers are those persons in whom the germ found suitable environments for continued existence and multiplication.

The question is often asked by the laity, and occasionally brought

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up as an argument by some of the profession, as to why, with so many persons harboring disease germs, we do not have more cases of the disease. It is well understood generally that the production of disease spreads not only on the invasion of sufficient number of virulent disease germs, but also on the presence of an individual of sufficient susceptibility to prevent their implantation and successful biological activities.

In cities, especially, we have an almost constant supply of the more common disease germs, and as a result there is very generally more or less continued inoculation, naturally and sufficiently, to produce a relative immunity. This is not true, in the same degree, in the rural districts, and we find that, as a result, many young adults from the latter source fall victims to meningitis and similar diseases when exposed to concentrated infection in army camps or similar congregations. In cities the meningitis victims are generally among the very young, who have not attained sufficient immunity.

It has been estimated that there are at least ten carriers to each case of meningitis. I feel sure that this is too moderate an estimate. We must remember that it is extremely difficult to attain exact figures in estimates of this kind, and if we will realize that the "healthy" carrier is potentially a much greater spreader of disease than the patient who is *comparatively innocuous,* in that light we can understand that, given the proper germs and the proper opportunity, there is hardly a limit to the proper dissemination.

The general examination of an entire community is obviously impractical. Our attention is usually directed to the entourage and the antecedent contact of the sick person. For this attention, to be productive of the most good, demands an early access to the case. This is impossible until the case is recognized; hence the importance of diagnosis.

There is no space here, nor desire on my part, to go into the diagnostic symptoms, nor is it necessary. I wish to impress, however, that when all is said and done the examination of the spinal fluid is the final arbiter in cases of meningitis, as to the etiology.

The differentiation of the so-called pus meningitides on the one hand, and poliomyelitis, meningism, tubercular meningitis and encephalitis lethargica on the other, can almost be made instantly by the appearance of the fluid—at any rate, in most cases.

A bedside cell and bacterial study is possible in nearly all cases, but none of these aids are available unless a spinal puncture is

made, and I want to make a plea for the more general use of this procedure.

Ten years, or fifteen years ago, very few men would make a vein puncture, and, many who did, did so with some trepidation. To-day venepuncture is an everyday and unnoticed procedure. With spinal puncture, among the general profession, the latter state of mind has not been reached.

The operation itself is comparatively simple and safe, if accompanied by ordinary elementary safeguards. Whatever difficulties are present are as likely to happen to an experienced operator as to a tyro, and can usually be easily overcome.

Once a diagnosis has been made, the work of the sanitarian is needed but in a small way as to the patient. The latter constitutes but an indifferent source of danger. As a rule, before convalescence has been established the patient is free of meningococci in the upper respiratory tract. Ordinarily, when cases occur in the same house, they are simultaneous, or nearly so, and are usually not due to one another; however, it must be presumed that the infection is close at hand.

Generally speaking, isolation and the ordinary method of handling sick cases of an infectious character will suffice here. Notification and placarding are obviously to be demanded. Quarantine and examination of all members of the household is essentially necessary.

Patients who are coughing or sneezing are much more dangerous than others. I have seen what I have believed to be good results from the use of screens and the use of sprays judiciously. The use of masks on coughing patients is so often impossible, from a medical and humanitarian standpoint, as to be applicable in only a few cases.

Now, as to the use of masks by the attendants and physicians. Our recent outbreak of influenza, and its attending professional and popular hysteria, has led to quite a discussion, pro and con, as to the value of masks. I am convinced that the conscientious and proper use of a well-constructed gauze mask is of great value. In this connection I want to emphasize the possibilities of the eyes as an atrium for disease and to call your attention to the article of Moxey, in the *Journal of the A. M. A.*, in which the greater area of exposed space for entrance of an infection in the eyes, as compared to the nose and mouth, is especially stressed. In order that gauze mask-protection should be raised to the highest efficiency, the eyes should be likewise protected, and, as gauze is obviously not

feasible, I have used goggles, such as are used to protect from the dust in driving, to which pads of gauze can be attached readily by a loop around the part which holds the glasses to the ear and fastens around the neck with a detachable elastic. In this way a package of clean pads could be carried and no objection could be raised as to the old method, that the infected side would come in contact with the face. Soiled pads could easily be cleaned and sterilized.

As to disinfection, I must say that I am more than ever convinced of the value of ordinary soap-and-water cleanliness and less impressed with the efficiency of ordinarily practiced gaseous disinfection. There is so much to say in regard to this subject that one must limit oneself, but I feel that, in the handling of these cases, the use of sprays must be discussed. The improper use of sprays in the nose is always disagreeable, and may be harmful, and, generally speaking, has not met with the greatest favor. I have such personal experience with what I have believed the beneficial results of sprays that I am still in the position to conscientiously recommend their use. I have used, in one outbreak at Jackson Barracks, of which I had charge, in the absence of dichloramin-T, which was not available, and iodin phenol camphor, liquid petroleum spray, with good results.

It is generally proven that it is in the naso-pharynx where the meningococci can be earliest and most surely found, and that a bacteremia precedes the infection of the nervous tissues, hence any method that will reduce the number of bacteria in the naso-pharynx will naturally reduce the size of the dose available, at any rate, and this latter effect I have found uniformly the result of spraying.

## DISCUSSION OF THE PAPER OF DR. SEEMANN.

**Dr. C. L. Eshleman,** New Orleans: As the doctor has said, spinal puncture is very easily performed, and we should not hesitate to attempt it. If the fluid is turbid it means meningitis, but what type of meningitis must be determined by bacteriological examination. The finding of the meningococcus is not particularly difficult. When it is present it is an intracellular organism that looks very much like the gonococcus. If the fluid is turbid and you do not find the organism in the smear, it has been suggested to centrifuge the specimen. If you do not find it then, take part of the specimen and grow it twelve to twenty-four hours. If you do not find it then, and cannot make a diagnosis of any other form of meningitis, go ahead and give the serum, anyhow.

The point that Dr. Seemann made about the eyes, I think, is a good one. I believe it has been recently shown that this condition is not alone

a meningitis—that is, an inflammation of the cerebral membranes, but it is also a systemic bacterial infection. The blood is infected and the organism is found in the blood streams as often as in the spinal fluid. Being, therefore, a bacteriemia, we have evidence of the disease in other organs—for instance, joint involvement, with arthritis. Pericarditis has been another form, and ophthalmia another. I recently saw a case that showed ophthalmia, a pericardial rub, and joint involvement, as well as spinal involvement. Perhaps the ophthalmia in this case is an infection by the individual from the nose by the fingers and then rubbing the eye; perhaps it is through the blood streams.

As far as treatment is concerned, serum should be injected, not only in the spinal canal, but into the blood. It should be injected every eight to ten hours, to get results. As to the serum you use, it is not often that I recommend a preparation of any particular make, but I do say this much, that in my experience the serum made by the Rockefeller Institute is unquestionably the best serum for this disease. Dr. Flexner, I believe, has traveled all over the country studying this disease, and the serum made there is made of cultures of various strains of the organism gathered all over the country; hence the potency.

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## THE PARHAM-MARTIN BAND IN OBLIQUE FRACTURES OF THE LONG BONES.*

By HERMANN B. GESSNER, M. D., New Orleans.

The purpose of this paper is to put briefly before you our experience with the Parham-Martin band in a total of six cases. These comprise five of the femur and one of the humerus.

In these cases the strict Lane technic, or what has been called the knife-and-fork technic, was employed. Nothing that is to go into the wound is touched even with the gloved hand. Sponging is done with gauze mops at the end of forceps. Preferably two knives are used—one for dividing the skin, the second for the deeper tissues. Periosteotomes touch the glove by the handle only; the same is true of the bone-holding forceps. Above all the foreign body, the band is handled with forceps during its introduction, and later with the tightening mechanism, only the handle of which is touched.

A little trick that simplifies the use of the band consists in passing it behind one of the fragments when freed, instead of waiting to approximate them and then pass the band. Another point, probably not new to those who have done open work on fractures, is that the limb is not to be fixed in position on the ortheopedic table until the fragments have been manipulated into proper

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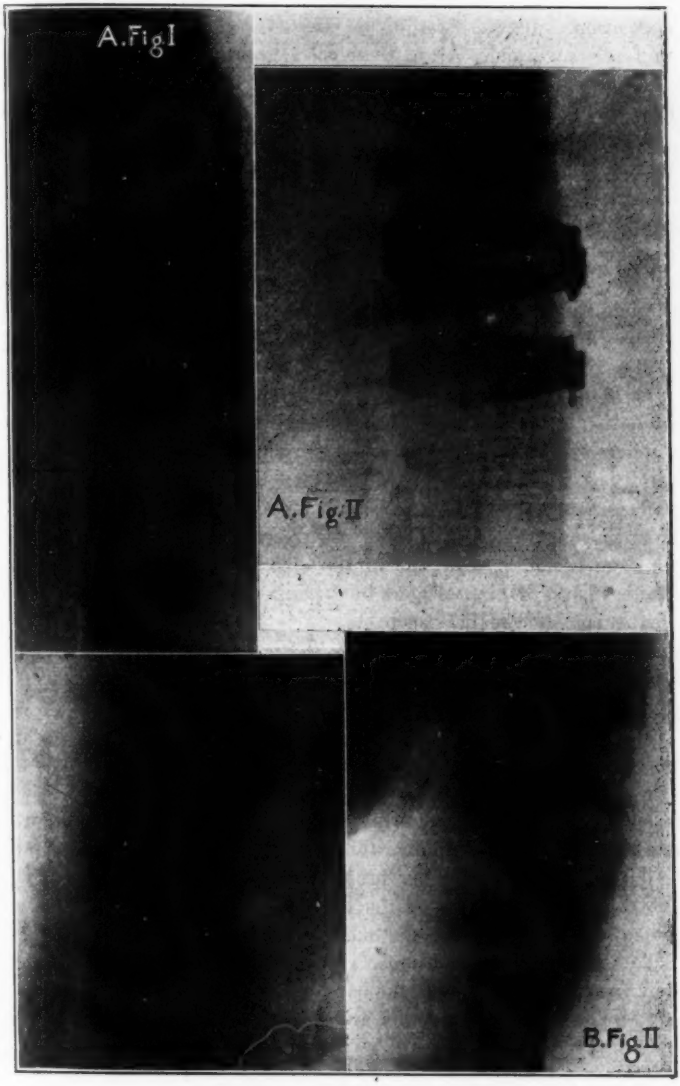


ILLUSTRATING DR. GESSNER'S ARTICLE.
(Disregard diagonal line, A Fig. 1.)

apposition. Before fixation is effected, reduction is more conveniently managed. All of these cases healed by primary union.

I shall give the leading facts of two of the cases which were of special interest.

One of these was a boy of twelve, in whom, six weeks after primary operation for spiral fracture of the femur, we operated a second time to remove the band. It had been suggested that the band, encircling a young bone, might arrest the growth in thickness and predispose to subsequent fracture. Removal was accomplished with ease. The old teaching, that accurate reduction with thorough immobilization is attended with a minimum of callus formation, was borne out in this case, as the site of fracture looked as though it had been patched with a liquid glue.

In a second case, fracture of the femur, due to a pistol-ball injury, there had been infection, and there was still a slight serous discharge. Nevertheless there was prompt healing and an excellent result. This was a case in which the obliquity was of such extent that it was necessary to use two bands to secure complete immobilization. The latter case, one recently infected, brings out what we consider to be one of the chief advantages of the band. There was no drilling of holes or driving of screws into the marrow of the bone. The danger of sepsis is minimized. The method amounts to tying a steel string about the two ends of an obliquely broken bone—a simple technic, as compared with that of plates or grafts.

The six cases gave four completely satisfactory results, two in which untoward conditions prevented an equally happy termination. One of these was an old man, whose fracture of the femoral shaft followed a slight fall, suggesting a pathologic fracture. Skiagraphs and operation did not confirm this suspicion. In this case the band held the fragments together properly, but union was delayed. In another case, a fracture of the humerus, union was delayed in a patient who had both malarial and syphilitic infections to cope with.

To sum up our conclusions, we are convinced that, for oblique fractures of the long bones, the band offers a simple, effective means of securing accurate reduction and firm immobilization.

### Discussion of Dr. Gessner's Paper.

**Dr. B. C. Garrett, Shreveport:** I want to discuss the phase of the knife-and-fork technic. While in General Hospital No. 14, after Col.

Martin became chief surgeon, he did not let anybody operating in the hospital put his fingers in the wound. He tied all the ligatures with hemostats, using an instrument once and discarding it, and never touching the wound with his fingers. At first it was pretty hard, but after a while we got around to it. You could do it pretty rapidly—just about as fast as putting your finger into the wound. You cannot save quite as much catgut, but you can tie off ligatures perfectly well. I assisted in two or three bone-sliding operations, and they healed up by primary intention.

I would like to ask Dr. Gessner if he ever has to take these bands off?

**Dr. Gessner:** We took one off in a growing boy, but the rest have been left in situ and have done no harm.

**Dr. R. M. Penick,** Shreveport: I want to report a case of very severe fracture of the femur in a girl sixteen years old. She had great loss of muscular tissue on the outside of the thigh—an automobile accident. We tried in every way to use extension, but it was a failure, because there was so much traumatism in a nervous little patient. I finally had to go in and I used two steel splints, each three and a half inches long, and two Parham-Martin bands. My idea is, that in all fractures, the best technic is to use autogenous splints if possible. If you have careful assistants you will be all right. But I used this method because I had rotation of the bone, even in a plaster cast, but I would hesitate to do it again. I felt the same way before I put all this hardware in this little girl's leg, but I had to have a very strong splint on that bone, so I put one of the splints on the inside and the other parallel to it on the outside, putting one splint—the inner—a little higher, to facilitate removing later, and then I put a Parham-Martin band above and below the fracture. I had two well-trained young men to help me, and we used the knife-and-fork technic, and got along beautifully. I went in eight weeks afterwards and took all the hardware out, because she was only sixteen, and I was afraid there would be rarefication of the bone. I had a splendid result. She had about three inches shortening of the bone previously, but after we got through she had none. The bone is a little bit bowed, because of the pulling of the internal muscles. I went cleanly into the scar and slipped out the splints and band, and in six to ten days it was entirely healed. This is an interesting case, because I used a great deal of hardware—in fact, an unusual amount.

**Dr. H. B. Gessner** (closing): To take up the question of transverse fracture, it has been suggested that the band be used for this as Dr. Penick has used it, employing two straight metal splints and a Parham-Martin band above and below. Another way is to take a piece of steel, bent lengthwise at a right angle, then make a groove in the bone above and below and slip one edge of the bent steel into the groove; then a band is put on above and below. It is a sort of steel ferrule used with the Parham-Martin bands.

About the removal of the band: I removed the band in one case—a boy of twelve. I am not convinced that this is necessary. It would take further observation to tell us that it is necessary to take it out, even in the young, on account of the idea that the bone, failing to grow in thickness, may not be able to resist strain. I think perhaps it will take some experimental work on animals to clear that up.

I have never used a band on a compound fracture, but I believe it is a reasonable thing to use it in that way. I have stressed the point in

my paper that, in using the Parham-Martin band, you do not drill into the marrow of the bone or drive screws into it; working under these conditions, it ought to be quite safe to use the band in compound fracture.

One thing that has been brought out in the war experience is the enormous importance of good immobilization in compound fracture. If you do not have good immobilization the irritation of the fragments moving about increases the spread of possible infection, and I believe the advantage of good immobilization would more than make up for the disadvantages of the incision.

I do not mean to give the idea that this band should be used in all cases of oblique fracture. When the fracture is not spiral, if the skiagram shows good apposition, then I would simply take that apposition and not do an open operation.

Dr. Penick raises an interesting point in regard to the quantity of hardware he had to put into the wound, but he had only two plates and two bands. The men who have been using this method have found that it does not make any difference how much iron or steel you put in if it is sterile, if you do not carry any bacteria with it. It is quality that counts, not quantity.

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## ACUTE MASTOID ANTRUM INFECTION IN INFANTS.*

By HOMER DUPUY, A. M., M. D., New Orleans.

There is really no mastoid process in the new-born. But there is present, behind and slightly above the ear, one well-defined and comparatively large air-space, known as the antrum. This cavity communicates with the middle ear through a canal, the *aditus ad antrum*. This communicating passage-way makes the middle ear continuous with the antrum. Such a structural arrangement, therefore, favors the spread of infection from the middle-ear cavity into the antrum. The mastoid process proper, with its cell structure, begins to develop after the first year of life, and only attains the adult type at the third year. The infant is certainly not exempt from inflammatory infections of the ear. With a large antrum contiguous to and continuous with its middle ear, involvement of this cavity can and does occur. This condition may be unrecognized, and thus such sequels as septicemia or meningitis will be attributed to some other unproven cause.

The following brief records of six cases taken from hospital and private practice will serve to illustrate the salient features which usually present themselves in this class of ear complications:

**Case 1.** W. M., aged three months, referred by Dr. DeGravelles, of Morgan City. History of earaches, profuse otorrhea, and temperature

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rises for several weeks. Post-aural swelling, right side, appeared three days before my examination. At operation found subperiosteal abscess and fistula in cortex leading to antrum, which contained pus and granulation tissue. Recovery.

**Case 2.** W. F., aged eight months, referred by Dr. DeGravelles, of Morgan City. Slight otorrhea, accompanied by violent earaches, with temperature rises for over one week. Swelling behind ear has only appeared thirty-six hours. Operation disclosed fistula high up in cortex. Pus in antrum. Recovery.

**Case 3.** W. M., aged eleven months, referred by Dr. W. H. Seemann. Baby cross and fretful for several days, when slight discharge appeared in left ear. Temperature ranging from 99° to 102°. On the eighth day

ILLUSTRATING DR. DUPUY'S ARTICLE.

Skull of eight-months infant. Probe passing from antrum into middle ear. From the X-Ray Laboratory, Hotel Dieu, Drs. Henriques, Menville, Devlin.

edema appeared above and behind left auricle. Operation discovered fistulous tract leading to antrum, which contained a large quantity of pus. Recovery.

**Case 4.** W. M., aged eight months, referred by Dr. P. Tetreau, of Lafourche. Ears discharging for several weeks, during which time the baby appeared fretful, but displayed no signs of intense pain. Post-aural infiltration on both sides. Operation disclosed subperiosteal abscesses on both sides. There were no fistulæ in cortex. Pus, granulation tissue, in both antra. Recovery.

**Case 5.** W. M., aged six months, referred by Dr. Thomason, of New Orleans. For several days violent earache, accompanied by periodic discharges from right ear. At the end of the week, slight edema behind right ear. Patient referred to me. Tympanotomy performed and pus obtained from ear. Edema behind ear increased and hyper-pyrexia continued. Operation showed fistula leading to antrum. Latter contained pus and granulations. Recovery.

**Case 6.** W. M., aged ten months, referred by Dr. Yenni, of New Orleans. Had broncho-pneumonia, in the wake of which signs of middle-ear trouble appeared, with secondary rises in temperature. Tympanotomy on both sides. Pus in both ears. Absolute relief from earache, but septic temperature continued. Lungs normal. White blood count, 47,000. No post-aural swellings. One week after tympanotomy patient showed signs of meningeal irritation, with temperature reaching 105° F. Operation disclosed a normal cortex, but there was a great quantity of pus in both antra. Recovery.

The youngest patient was three months, and the oldest ten months of age. Every one presented a large mastoid antrum, without the slightest trace of the usual cell structure and arrangement of older subjects.

Pain, while a constant symptom, expressed itself rather in fretfulness than in violent crying. This series certainly emphasizes that we cannot gauge the seriousness of ear troubles in infants by the degree of pain exhibited. Intense pain may be associated with a slight middle-ear involvement, while a suppurative process may only cause fretfulness.

Profuse otorrhea was present in some, while it was only slight in others. But in every instance there had been some evidence of an ear discharge.

In every case but two a fistula was present, establishing communication between the outer surface of the skull and the mastoid antrum. This explains the frequency of post-aural swellings behind and above the auricle in the above series of cases. This swelling was the chief indication which led to operation. One case (No. 6) presented not the slightest post-aural infiltration. The diagnosis of antrum infection on both sides was reached through two symptoms—a profuse otorrhea and a high white blood count.

The post-aural swellings were all late developments, the child being sick usually over one week before the appearance of this phenomenon.

Case No. 6 teaches the following valuable lessons:

1. Not to wait for post-aural swelling in infants as the only indication for operation.

2. With a persistent otorrhea, septic temperature and a leucocytosis, operation becomes imperative.

3. In the infant, while a thin cortex over the mastoid antrum invites perforation from the antrum side, not a few cases must succumb to intracranial and septic complications before the appearance of a post-aural swelling. In the absence of this sign we will have to be guided by the temperature record and by the leucocytic count.

## DISCUSSION OF DR. DUPUY'S PAPER.

**Dr. M. P. Boebinger,** New Orleans, presented a specimen from a child one year old. In the new-born and young infant you find only an antrum, there being no mastoid cells present. In the infant there is a complete absence of the mastoid process—only a flat surface is found, the antrum and facial exit are superficially placed, so the surgeon must incise cautiously in doing a mastoidectomy. The annulus tympanicus is open at the top; there is direct communication between the dura and mucous membrane lining of the middle ear.

The petro-squamous fissure is still ununited, hence always the liability of brain abscess, as well as meningitis. The cartilaginous membrane of the external meatus is attached to the annulus tympanicus, there being no bony wall present in the new-born, so pulling and tugging the auricle will elicit pain in middle-ear disease of the infant.

The facial nerve enters the middle ear just in front and above the fenestra vestibuli; often this portion is covered by a thick, delicate bone, or even an abscess, being protected by only a membrane; so, gentlemen, you can easily understand why facial paralysis can complicate middle-ear infections.

The cleft left in the undeveloped annulus tympanicus, the petro-squamous fissure will often explain why an infant will develop cerebral abscess or meningitis.

Before closing my discussion, let me call your attention to the position of the pharyngeal opening of the eustachian tube. This is shorter, lies close to the posterior chonæ, and, as the infant develops, it recedes and is found higher and further away from the chonæ.

**Dr. Homer Dupuy** (closing): Dr. Boebinger spoke of facial nerve paralysis in infants. I differ with him, as I have never seen a case under one year of age in which the middle-ear trouble was associated with this paralysis. It is well to emphasize that the petro-squamous fissure which passes just over the antrum affords frequently in the infant an outlet for the accumulation of pus in the antrum. This explains why it is that the Wilde's incision, made behind the ear, over the swelling, sometimes succeeds in these very young subjects. But it must be admitted that to stop with the skin incision is insufficient surgery, and that in every instance where there is a post-aural swelling we should treat the patient surgically, as if it were a mastoid antrum infection, and enter the bone

## LESSONS LEARNED AND RESULTS ACCOMPLISHED DURING THE INFLUENZA EPIDEMIC.*

By G. C. CHANDLER, M. D., Shreveport, La.

For six and a half years I have fought all air-borne epidemic diseases by means of isolation and ventilation, and have always found this method effective in stamping them out when the disease is feared by the people.

Diseases like measles and chickenpox, while difficult to suppress, have been kept at a minimum. To obtain the coöperation of the people, it is necessary not to ask of them too much, so my policy has been to ask of them only the essentials and give them common-sense reasons for the request; if you do more, the people become confused and embarrassed, until they cease to give intelligent co-operation, if they give any at all.

Years ago, when I learned that no disease could be contracted by placing the germs on the unbroken skin, I decided that there was no such thing as contagious diseases and all diseases were contracted in three ways—through the digestive tract, the respiratory tract, or by inoculation. Since nature provides means to protect the system from a certain quantity of disease germs, it is only when concentrated in sufficient quantities to overcome this resistance that disease results. I believe the principal, if not the only means by which influenza is contracted, is by breathing into the lungs air in ill-ventilated places where the germs are concentrated in sufficient quantities to produce the disease. Fortunately, the first few cases brought into Shreveport proved, to my mind, conclusively, that it is contracted by breathing the germs that were thrown into the air from the lungs of the patient, so I had a clear idea of what, in my opinion, was necessary to protect, and it gave me the necessary firmness to resist the hysterical demands of a great many of the people. In all previous epidemics the people's money has been spent freely and business has been paralyzed unnecessarily, when in a city it is absolutely essential for business to go on, for so many people depend on their daily labor for their bread. I know of men to-day in Shreveport who, previous to former epidemics, were prosperous, who were rendered bankrupt by destroying the commerce of the city in attempts to suppress epidemics by means which are now known to have been absolutely useless as a protection.

I will give you the reasons why I say that the influenza epidemic

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in Shreveport proved that influenza is spread by breathing in the germs concentrated in ill-ventilated places. One of the first cases, if not the first case, was brought to one of the sanitariums dying with pneumonia. It was not suspected of being influenza, and in less than twenty-four hours two doctors and five nurses, all on the same floor, were down with the disease, and within three days four more nurses contracted it. Although the hospital was full of patients, not one of them contracted the disease. Later, when the epidemic was at its height, forty influenza cases were in the hospital for days without another nurse or patient contracting the disease. This was the experience in all of the hospitals. Another sanitarium had a hundred cases constantly on hand, and over twenty nurses, besides doctors, contracted the disease, without any of the other patients taking it. In dozens, if not hundreds of homes in the city, one case occurred without other members of the household contracting the disease, and invariably it was in homes where there was free ventilation, by keeping the doors and windows wide open. On the other hand, where homes were not freely ventilated, almost invariably all the occupants contracted the disease, and this was in homes where they feared a draught and the pure air of heaven. I reasoned that, in carrying a hundred cases into a hospital and opening the doors necessary to feed these cases, would necessarily contaminate the general air of the hospital to a certain extent, and any place of public gathering where ventilation was sufficiently free to sweep out the exhalations from the lungs of the crowd would be freer from "flu" germs than the air in the hospitals, and, since the air in the hospitals did not spread the disease, gatherings would be safe with proper precautions.

In November, when the Federal and State health officials raised the quarantine, stating that the influenza epidemic was over and the danger passed, I published a bulletin in the Shreveport papers, stating that, in my opinion, the only way for an epidemic to end, was for the disease to use up the material or the germs to lose their virulence; that we had plenty of unused material in Shreveport and the germs had not lost their virulence, and as soon as cold weather or winter caused the people to stop ventilating freely there would be a recrudescence of the epidemic, but I favored the raising of the quarantine, because free ventilation would give the necessary protection. This statement was borne out by results.

In sixteen days, before the quarantine was raised in Shreveport,

there were twenty-one deaths from influenza and all forms of pneumonia; during the forty-six days following the opening up of everything there were only twenty-four deaths. With the recrudescence of the epidemic throughout the United States after raising the quarantine and the recommendation of the health authorities that the quarantine be reinstated, the people went into a panic, and most sensational statements were spread broadcast in our city and great pressure was brought to bear on me to close everything, especially the schools and picture shows. I replied, as regards the schools, that the children would be safer in schools, with windows and doors open, than they would be at large, and that, as to the picture shows, if they were kept open and the exhaust fans kept running to renew the air promptly, they would be safe, and out of 170 cases reported since the opening of the picture shows only six had even attended a picture show. They invariably replied that all cases were not reported and that the town was filled with influenza and that it was as bad as it ever was. I replied that, of course, all cases were not reported, but all deaths were reported, and no new cases had been brought into our hospitals for five days, and there were only about a dozen old ones, which sustained the fact that the conditions were better than ever before in Shreveport. This statement of facts usually had no effect, so I ended the argument by stating that I would injure no man's business or interfere with the amusement of the people when I knew that they were not spreading the disease.

During the terribly cold spell at the end of the year for a few days everything was closed tight, and there was a recrudescence of the disease, as I had warned the people in November would occur. Twenty-one children out of forty in one grade were taken on almost the same day. I told the Board of Health and School Board that it was open up or close up the schools; that I was satisfied that if the windows and doors were thrown open, regardless of the cold, and the children who were not properly clothed were sent home, that it would save many lives, not only from influenza, but other diseases. I knew that many of the people and some of the doctors feared draughts and that I would be condemned for the regulations, that any sickness occurring would be attributed to me, but I was so confident that we would show a reduction in deaths among the children that I was willing to shoulder the responsibility. What was the result? During the months of December and Janu-

ary there were twenty-five children under ten years of age to die; twelve of these deaths were from influenza and pneumonia; only one of the twenty-five was taken sick while attending school. I tabulated the deaths for these months for five years preceding, and the average deaths were twenty-five, with a smaller population and no influenza epidemic. On opening the windows and doors of the schools in January the influenza immediately stopped spreading to any extent among the children, and as soon as it got a little warmer and people and business houses opened up the windows, the epidemic was practically ended in Shreveport. During the last ten days of January only sixteen cases were reported, and there were only fourteen deaths in February from influenza and all forms of pneumonia—exactly the same as occurred in February last year, when no influenza epidemic prevailed, which I think justifies the statement that the influenza epidemic ceased in Shreveport in the latter part of January.

The fight to control the influenza epidemic in Shreveport was based on the theory that the disease was only contracted by breathing into the lungs the air in ill-ventilated places, contaminated by concentration of the germs from the throat and lungs of patients or carriers of the disease. Before the disease appeared in Shreveport I began a campaign of education, impressing on the people that free ventilation was the best preventive of influenza. The people were warned by bulletins in the press that influenza was certain to invade our city, and the way to protect themselves was to keep the windows and doors wide open. Letters were sent to all ministers, white and colored, and to leaders in the various organizations, asking assistance in educating the people on the absolute necessity of free ventilation as means of protection, not only from influenza, but other diseases. The fight against the influenza epidemic was made by the Board of Health without asking or receiving a dollar for that purpose. Some of our benevolent organizations spent some money in furnishing nurses and necessities to those unable to obtain them.

When the disease invaded our city every case was posted so people would not expose themselves, and the occupants were given a card telling them how to protect the rest of the family, and they were urged to cut out visiting; if they did visit, to confine themselves to the porch in the open air. During the influenza epidemic, in my opinion, there were only two things to do—either close up and

stop public gatherings, or open windows and doors. The latter method is, in my opinion, by far the most effective; closing places of public gatherings is necessary unless you can get the coöperation of the people in free ventilation. Closing places of business and amusement of the people excites and harasses them and prevents cheerful and intelligent coöperation, so necessary for the control of epidemics.

I have never favored the closing of our schools or any place where the regulations as to ventilation could be and were carried out. Public gatherings were prohibited in Shreveport for thirty-five days, without consultation or previous notice to the City Board of Health. During this time there were eighty-one deaths from influenza and penumonia, twenty-one of which occurred in fifteen days preceding the raising of the embargo; during the thirty-five days following, there were nineteen deaths, and during the entire 116 days that public gatherings were allowed during the epidemic there were only seventy-six deaths. The only time after the public gatherings were allowed that showed an increase in the disease was in January, immediately following the intensely cold spell in the latter part of December, which caused every one to close up for a few days, but the spread was practically immediately stopped in the schools by opening up, and in a short time the spread was stopped throughout the city. Out of the 398 cases reported in January, only sixteen were reported in the last ten days of the month. I doubt if any place where gatherings were prohibited can show a similar prompt suppression of the disease.

Free ventilation is not only the best prevention for influenza and its complications, but it is also the best method for cure. Certainly, when only part of the lungs must do the work of the entire lungs, if the patient is supplied with air depleted of its oxygen and containing the impurities of the body, it certainly lessens the chances of recovery. I have always believed and taught the people that the disease is never contracted in the open air or by means of food.

Experiments have since failed to produce the disease by means of food or inoculation, which confirms these views, for we all know that when a case is brought into an ill-ventilated house others will contract the disease. In times of epidemics it is absolutely necessary to confine your requests to people for coöperation to essentials. If you make regulations because you are requested to do so, simply because they are harmless in themselves, you will confuse the people,

for they cannot differentiate the important from the non-important; besides, you will harass them until they will cease to give co-operation, so necessary for protection.

In conclusion I will say, estimating our population at 42,000, which I think is fair, our death rate for October, November and December was 2.7 per 1,000 of population; if January and February are included, the rate would be 3.7 per 1,000 of population. Our non-resident deaths were seventy-seven. Non-resident deaths do not materially increase the rate in large cities, but in small cities, like Shreveport, it makes a great increase, and does not show health conditions. In 1918, 597 deaths from all causes occurred in our hospitals, most of them brought into our city for treatment, while deaths in the city outside of the hospitals were only 488. We had four non-resident deaths from the influenza and pneumonia in Shreveport from four towns before there was a death in our city from this disease.

The assistant secretary of the Board of Health has tabulated all influenza and pneumonia deaths from the original death certificates; it may be of interest to you to see the various localities from which these cases came.

### DISCUSSION OF DR. CHANDLER'S PAPER.

**Dr. Francis M. Furman,** Shreveport: As bearing out some of the points made in Dr. Chandler's paper I might give you a little history of our organization. We landed—a regiment of 1,260 men—at Brest on September 12. We were marched out and given a field. The men were put in pup tents, some of the officers slept in the barn with the cows, one of which was pretty friendly, and a rat suffering from insomnia. We immediately threw around these men a guard to keep them in that field. The hospital was so crowded with cases of influenza that they could only take care of the serious cases. We had a few cases of influenza only, and in order to treat these cases we had to put up tents and make an emergency hospital, where we treated most of the mild cases. Around Brest the type of influenza was particularly bad. Almost everybody had it. We got away from there about the 23rd of September. On the last day we had about twelve new cases of influenza. We went on a French train to the interior and landed in a little town where the "flu" was not so bad. Our men were put in lofts and barns, some of them fairly well ventilated and some not. We made the men hang their shelter tents between them, so that each man slept practically in a box, so they could not cough in each other's faces. But, in spite of our precautions, shortly after we got to the little town we began to have influenza, and about September 28 or 29 we had ninety new cases. Unquestionably we picked up a few cases in Brest, but the true influenza cases did not develop until after we left Brest, until we landed in this little town, where the men slept in French homes, where the ventilation is not as perfect as it is in tents.

## BONE-GRAFTING FOR NONUNION OF FRACTURES, WITH DISCUSSION OF ALBEE'S SAW.*

By E. L. SANDERSON, M. D., Shreveport, La.

The purpose of this short paper is to discuss one method of treating nonunion of fractures, explaining the use of Albee's saw, stressing some points of importance and bringing forward some improvements in the technic, especially in the design of the saw.

All surgeons are seeking more and more to imitate nature in the repair of the human anatomy. Many methods have been used in an effort to make a bone heal or unite where nature had failed. None have followed nature quite so closely or has been quite so successful as bone-grafting. And no method of bone-grafting has been quite so successful as the sliding graft made possible by the saw designed by Albee.

For the benefit of those not familiar with this operation, and to bring out the points I wish to stress, I will recite the technic, and as we proceed I will emphasize the points upon which uniform success depends.

We will suppose the femur has been broken in its middle third and has not united after the usual time allowed for healing.

Under general anesthesia a lengthwise incision is made over the break, preferably on the outer aspect of the limb. It should be mentioned here that this operation cannot be performed with any degree of success without a fracture-table or an extension apparatus similar to the Lorenz. The patient should be placed in extension as soon as asleep. I prefer to extend him before the anesthetic is given, so that any discomfort about the crotch or feet may be corrected. The break is exposed and the bone freed of periosteum to a width of about half an inch, extending about one inch on one side of the break and about two inches the other side.

It goes without saying that the most rigid asepsis must be observed. Surgeons who do a great deal of bone-work become very proficient in doing the entire operation with instruments only. The ordinary surgeon has great trouble in attempting this technic. There is no sane reason why a rubber glove boiled with the instruments should not be just as sterile as the instruments—and it is, so long as the surgeon keeps it sterile. By using the hands the usual surgeon can do better mechanical work, and do it quicker.

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

However, there is little in this operation that cannot be done easily with instruments.

The break is now observed for intervening tissues and the ends freshened if necessary. The bones, now under full extension, will assume a straight line and remain in perfect relation. We are now ready for the Albee saw. This instrument is an electrically-driven flexible shaft, not unlike that seen propelling the vibrator in the barber shop. At the end of the flexible shaft is a detachable handpiece, which may be boiled. This handpiece carries two circular saws about two inches in diameter and a centimeter apart. There are two designs; one saws crosswise to the handle, the other is made like an ell, with the saws cutting parallel with the handle. The first style is difficult in stout patients, as the saws are so arranged that a wound that is more than one inch deep almost precludes their use. The other, being offset to the side, makes it difficult to carry or guide it through the bone. I have designed a handpiece like a double-tracer wheel. A saw is on either side of the end of the handle, and the pressure of one equals the other while in action. They are adjustable, so that a different width of cut may be secured.

We proceed now by sawing into the canal of the bone two lengthwise cuts extending one inch on one side of the break and two inches on the other. The short piece of bone is lifted out and the long piece slided over the break. The short piece is now placed behind the long piece and the wound closed and a plaster coat applied, including foot and pelvis, the entire procedure being done while under extension.

The saws run at a very high speed. Sawdust and blood are thrown up into your face, and may fall back infected. I have devised a guard, shaped somewhat like the bicycle guard, which stops all the residue, and from which it may easily be collected and troweled between the break somewhat like the mason fills a joint with mortar. This bone sawdust cement is the only part of the technic for which I claim originality. It is the nearest approach to nature's early callus that one can imagine. It is made of the patient's own blood and bone, and applied when made.

This technic, when rigidly followed, will give uniformly successful results in cases of nonunion, provided, of course, that systemic conditions are given the attention always demanded.

### Discussion of Dr. Sanderson's Paper.

**Dr. B. C. Garrett,** Shreveport: I had the pleasure of working with Dr. Albee a little while in the army and helped him in four cases. Three of these were fracture of the femur and one was a tubercular spine condition. We did a sliding graft in the fractures of the femur and a bone transplantation in the case of the tubercular spine; all healed by first intention. The knife-and-fork technic was carried out.

Dr. Nelson and myself have had five or six cases of bone transplantation since I have been here in Shreveport, and the results are very satisfactory.

**Dr. R. M. Penick,** Shreveport: I have used the sliding graft, as described by Albee, as Dr. Garrett says, and I take heavy chromic gut and run it through drilled transverse holes in the graft and shaft, loop it over and tie. It seems quite sufficient to hold it in place.

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## INTERLOBAR PLEURISY.*

By M. S. PICARD, M. D., Shreveport, La.

This is more a case presentation than a thesis of this condition. This is due to the paucity of the literature on this subject, and, above all, to the fact that this condition belongs more to the radiologist than the internist or pediatrist, for without the radiologist, on account of the obscurity of the disease, the vague symptoms and the absence of physical findings, a diagnosis is almost impossible.

While cases in adults, especially of interlobar empyema, are met with, while the "flu" epidemic has given every varied form of respiratory condition in the adult, and many were observed, yet in children this condition is rare or unobserved. In going through the various American text-books—Holt, Kerley, Fisher, Dun, McKee and Wells—no mention of an interlobar pleurisy or empyema can be found. The same is true of the German text-books and literature on this subject in children.

The very absence of symptoms makes this condition interesting. A case comes under observation with symptoms pointing to the respiratory tract; there is cough, temperature; temperature, cough; few physical signs, aside from a few large râles by auscultation, and percussion negative, the blood count (white) being either high or low, depending on whether it is an interlobar pleurisy or empyema. Diagnosis, a prolonged form of grippe. A few cases, however, present other symptoms. By the lightest percussion one detects a

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band-like layer of dullness; above and below it a tympanitic note. Diagnosis, encapsulated empyema, lung abscess, thickened pleura, sepsis, and, only when the patient passes or expectorates pus, is the diagnosis made, and not with any certainty.

A condition which resembles this to some extent, and which runs with the same temperature and cough, is a foreign body in the lung—a grain of corn, a pea, peanut, or pecan shell, around whose lodgment an abscess is forming. Here the X-ray is negative, the only symptoms being whistling râles.

The first observation of this condition was made by Gerhardt in 1893. His case, an adult, commenced acutely with cough, chill, high temperature, pain in the side. At first, by auscultation, nothing was found; later a band of dullness two to three centimeters was found. This was surrounded by a tympanitic note. Gerhardt's diagnosis was encapsulated empyema. Gerhardt had a series of these cases, and in all he made a diagnosis of encapsulated empyema, lung abscess or sepsis. These cases ran from two to six weeks, ending in recovery or the expectoration of pus. It was Gerhardt again who first described a case with the aid of the X-ray, and gave all the X-ray characteristics of this disease. This case, an adult, had an acute onset, with high temperature, cough, pain in the side, a band of dullness extending from the right mammary line backwards. A diagnosis of encapsulated empyema was made. X-ray diagnosis, an interlobar pleurisy, two fingers wide, extending backwards, becoming smaller. This was the first interlobar pleurisy diagnosed with the X-ray.

My interest in this condition, as a pediatrist, is based on its rarity; a knowledge that it does exist; a knowledge which sometimes may clear up our obscure cases.

That a small amount of fluid in the pleural cavity offers great difficulties in diagnosis is apparent from the studies of Muller. Muller states that unless the fluid in the chest cavity amounts to one-quarter or one-half liter it cannot be detected by percussion. Again, in the interlobar pleurisy or empyema, you have an immovable fluid. Diterlen reported six cases of interlobar pleurisy—three following pneumonia and three complicating tuberculosis. In three cases only were definite physical findings, the typical X-ray findings; the physical examination was negative.

The following case appeared in my practice in January, 1918:

**Miss M.**, aged nine years, was suddenly taken sick, with high tem-

perature and cough. I saw her three weeks after the onset of the disease. Family history: Father and mother both in good health; one aunt, living with her parents, died of pneumonia. This was a full-term child, breast-fed, nursed until fourteen months old, thrived well as a baby, had no disease except whooping-cough and measles in 1916 and 1917. Physical examination shows a well-nourished child, slight enlargement of the cervical and inguinal glands. Examination of the chest, with the exception of a few large râles, negative; no dullness or decreased respiratory sounds; no enlargement of the liver or spleen. Temperature, while under observation and previous to it, was of a remittent character, ranging between 100° and 103½°. Widal, plasmodia, stool, negative. White count, on admission, 7,500; one week later, 8,500. Von Pirquet positive. The low white count and the positive Von Pirquet made me think of tuberculosis, especially as her history showed that she had lived in a tubercular environment. The temperature reaction was too severe to have tuberculosis, without some clinical or physical manifestations. Dyspnea was not marked enough to make diagnosis of acute miliary tuberculosis. The case was referred to Dr. Barrow for an X-ray picture of the chest. This cleared up the diagnosis. A fluid was found between the upper and middle lobes. This child was kept in a sanitarium for ten days, during which time no physical signs could be found. Believing that the best and quickest results could be obtained from a change of climate, I sent the child to Pass Christian. A complete recovery took place in three weeks. The total duration of the disease was seven weeks. No subsequent picture was made.

## Discussion of Dr. Picard's Paper.

**Dr. E. C. Samuels,** New Orleans: I would like to ask the doctor how he arrives at a diagnosis of fluid in that case—whether it could not have been a band from an old pleurisy. I have been unable to make a diagnosis with the X-ray in interlobar pleurisy without the aid of the screen and fluoroscope, and in so far as drawing the conclusion that that is fluid, I cannot see exactly how the diagnosis was made. Probably Dr. Picard will be able to tell us in closing.

**Dr. S. C. Barrow,** Shreveport: I could not imagine the question of Dr. Samuels being raised. The X-ray findings, not only in interlobar pleurisy, but interlobar empyema, are extremely characteristic. There is no error if you hold in your mind the real pathology. The plate that Dr. Picard has shown here is characteristic, but unfortunately it was washed badly and is now old; but the shadow as shown on that plate will be seen in all cases of interlobar pleurisy. I take the stand that nothing of that type can be demonstrated by the fluoroscope; it can be better shown by the X-ray plate, and the X-ray plate is permanent. It is recognized by Rœntgenologists that more defects of the chest can be shown by the X-ray plate than they ever imagined by the fluoroscope. If you have an interlobar band there you would not get the expansion that is shown on the plate. The pleural folds fall together, unless they are separated by fluid—you cannot get that triangular shadow. If you hold in mind the anatomy of the pleura you can readily imagine how that shadow would be formed. Such cases are rare; I have had three, and two were aspirated and confirmed. There is no doubt in my mind that that was interlobar pleurisy.

## THE MECHANICAL TREATMENT OF NOSE-BLEED.

By D. T. ATKINSON, M. D., San Antonio, Texas.

The subject of this paper calls for no apology, for violent epistaxis, whether traumatic, the result of broken-down neoplasms or due to constitutional dyscrasias, is a condition which has caused nearly every physician no little concern at some time during his professional life.

Probably the most trying of these epistaxis cases are those of traumatic origin, and these occur usually where the facilities for examination and treatment are as bad as could be possible. These cases are usually surrounded by a host of anxious friends and interested onlookers, and if the physician fails to control the hemorrhage the condition becomes very unpleasant, if not dangerous, to the patient and extremely embarrassing to the doctor.

Although a number of methods of controling nasal hemorrhage are advocated, such as the insufflation of powdered alum, spraying with astringent solutions, acetate of lead, sulphate of copper, of tannin, applications of collodion to the bleeding surface, the administration of ergot, etc., it is nearly always necessary, in cases sufficiently severe to necessitate the summoning of a physician, to resort to some mechanical method of treatment if the desired results are to be had.

Perhaps the first thing indicated in the majority of cases is the application of pressure to the bleeding surfaces, by means of pledgets, of gauze or absorbent cotton, with or without astringent solutions. The bleeding surface should be sought for, if possible. That is a very easy matter in the doctor's office, but in emergencies it is usually impossible to locate a spurting vessel because of the lack of facilities for making examinations. In such cases, pledgets of cotton saturated in a styptic, preferably adrenalin chlorid, may be pushed up into the nares at random, with the hope that the point of bleeding may be covered and the hemorrhage stopped. Pieces of string should be fastened to the plugs to facilitate their removal.

Where a good light can be had and, with the head-mirror and nasal speculum at command, the simplest and most efficacious method of controlling nose-bleed lies in the gauze tampon. The gauze strips should be about an inch in width. In emergencies a narrow gauze bandage may be used. A ball of gauze is carried, with forceps, high up to the roof of the nose, and is pressed into position between the middle turbinate and the septum.

The gauze is now fed into the nares in a zigzag manner, extending from the roof to the floor of the nasal cavity, until the anterior nares is reached. The slip is now cut off and the end tucked into the nostril. For the styptic effect, the gauze may be soaked in adrenalin chlorid or solution of tannic acid or other astringents. This method has the advantage of bringing the gauze in contact with the whole mucous surface of the nose. The gauze fills with clotted blood, thus equalizing the pressure, and the bleeding point is usually reached and the hemorrhage controlled.

A very ingenious and efficacious method of tamponing the nostril was suggested by Casselberry (*Illinois Medical Journal,* March, 1909). His tampon consists of a thin rubber finger cot, which is inserted in the nose and plugged with small pieces of cotton. I have used this method a number of times after nasal operations with very good results. Its advantage consists chiefly in its presence in the nose causing a minimum amount of danger of infection of the accessory sinuses and middle ear. The gauze, not being saturated with nasal secretions, does not putrefy. Its smooth surface does not adhere to the wound, so it is easily removed. To introduce, the cot is pushed up in the nostril on the point of a catheter or any blunt instrument. Its opening is held with a forcep, while pledgets of cotton are fed into it until its lumen is enlarged and its wall hugs the bleeding surface. This method was devised more as a prevention of hemorrhage after operation than as a controller of hemorrhage once established, but is applicable to either.

For the control of persistent epistaxas of the seeping rather than the spurting type, various kinds of rubber bags have been used. These are inserted into the nostril and inflated with air, with results which have been more or less satisfactory. I have seen used, in a number of cases, the bag expanded with water rather than air. This latter method of plugging the nares is of more value, probably, than the former, as the walls of the bag filled with water have more resisting power than they would were the bag inflated with air, and the clot formed over the bleeding vessel is held more tightly over its surface.

In case of severe traumatism, with violent and dangerous hemorrhages, or in cases which resist all the simpler methods of treatment, plugging the nares, both posteriorly and anteriorly, should be resorted to. This is rather a painful procedure, and is not often

borne gracefully by the patient, but is often necessary in the severer cases to save life. When the posterior and anterior nares are to be plugged the operator proceeds in the following manner. A small catheter is passed through the nostril and is caught with a forcep as it glides along the pharyngeal wall. It is then pulled through the mouth, grasped by the operator, and a piece of string, to which is attached a plug of wet cotton, is tied to it. The catheter is now withdrawn through the nose, bringing the string with it. The physician now makes tension on the string with one hand while the finger of the other is passed into the mouth, and the plug is pushed above the soft palate and pulled into position. The string in the anterior nares is now drawn tight and tied over a plug of cotton outside the nostril. This is the last resort in nasal hemorrhage, and will control, while in position, practically all cases of nose-bleed.

Nasal tampons should not be kept in place any longer than is necessary to cause the formation of a clot. If allowed to remain too long, infection of the sinuses and other conditions may follow the putrefaction of secretions and the retention of pus. The tampons should be removed in at least twenty-four hours, to be replaced, if necessary, after the nose is cleaned by gently syringing. A day or two after the hemorrhage is checked the nares can be freed from clots by injections of mild astringent solutions and the patient dismissed, with instructions to avoid violent exercise for a time.

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## ELIXIR TRICHLORETHIDEN PROPENYL ETHER IN OBSTETRICS.

By J. W. LAMON, M. D., Donner, La.

The intense interest manifested in the scopalamin-morphin treatment of obstetrical cases and the universal disappointment when it proved to be dangerous, make us realize the necessity of leaving no stone unturned to relieve suffering during parturition.

I have used elixir trichlorethiden propenyl ether in combination, with one-eighth of a grain of morphin, in fifty-six cases, with the most gratifying results. Not one case of depression or any other bad effect followed its use.

My attention was first called to the fact that this drug is very little of a depressent when I was called to see an infant suffering with earache. The baby was given a very small dose of morphin

when warm applications failed, and a bottle of elixir trichlorethiden propenyl ether was left to be given at certain intervals. The mother, who was quite ignorant, gave four times the quantity prescribed. Neither the pulse nor the respiration of the baby was at all affected. This incident suggested the idea of using it in obstetrical cases, as it is usually the infant who is affected unfavorably by the scopolamin-morphin treatment.

I will mention three typical cases where this treatment was used. As the patients are the best judges as to the relief given them, I will quote their statements *verbatim*:

**Case No. 1.** .Mrs. H. L., age 22, primipara. Examinations showed os dilated to size of silver dollar. She was very nervous. The pains were continuous, with no interval of rest. She was given one-eighth grain of morphin hypodermically, with apparently no effect. This was followed by two tablespoonfuls of elixir trichlorethiden propenyl ether. The patient became quiet in about fifteen minutes. When the head reached the perineum the nurse began giving whiffs of chloroform during each pain. The patient objected, however, saying, "The pains are not so bad now. I would rather stand them than to be bothered with that stuff" (meaning the chloroform).

**Case No. 2.** Mrs. F. H. R., primipara, age 21, only child, raised by an indulgent mother. Highly educated and self-centered. We all expected lots of trouble. When the os had dilated to the size of a 50-cent piece one-eighth of a grain of morphin was administered hypodermically and two tablespoonfuls of elixir trichlorethiden propenyl ether given by mouth. A second dose of the elixir was given when the os had dilated somewhat larger than a silver dollar. When the girl baby was born the nurse risked what ordinarily means a "calling down" from the patient by saying, "You ought to have a little boy the next time." The patient's reply showed that she did not dread going through the ordeal again, as she said, "Yes, I would like to have a little boy."

**Case No. 3.** Mrs. J. E. B., age 36, multipara. Patient had been in labor all night when I was called in. Pains were lacking force, but prevented sleep. Os dilated to the size of a half-dollar. I administered one-eighth grain of morphin hypodermically and two tablespoonsful of the elixir orally. Pains increased in force, and the intervals between pains lengthened. She slept well between pains. She volunteered the information that she had suffered much more before the drug was administred than during the second stage of labor.

This article is submitted with the hope that this treatment will prove as satisfactory in other hands as it has in my own practice.

PROCEEDINGS OF THE AMERICAN SOCIETY OF TROPICAL MEDICINE

ATLANTIC CITY MEETING, JUNE 16-17, 1919.

# ONE PHASE OF THE MOSQUITO WORK CONNECTED WITH THE ARMY CAMPS IN 1918.*

By C. S. LUDLOW,
Army Medical Museum, Washington, D. C.

Among the various activities which developed during the war, none are perhaps more marked than those connected with the health of our soldiers. Supported by an authority never before at its command, the Medical Corps of the Army has been able to control the subordinate branches and details in regard to sanitation and hygiene, with the result that the health of the army has been of a quality not possible of attainment at any previous time. It is not the province of this paper to enter into a discussion of these various branches, for even to mention them and designate their activities would take considerable time.

Probably the most important is the subject of preventive medicine, the value of which, with its many subdivisions, it is almost impossible to exaggerate. Under this subject, as one of the small subdivisions, comes medical entomology and its closely related branch, insect control, which covers control of breeding places and adults, and protection of the men from insect attacks by various mechanical and chemical means.

The work of medical entomology, as connected with our army, in respect to the study of mosquitoes, was being carried on, under the auspices of the Surgeon General of the Army, as far back as 1901 in the Philippines, and collections were taken at many of the posts and subposts in these islands, the work being vigorously pushed for some years, and, in a less extensive way, is still in progress. Later, about 1905, one summer's work was done in the continental United States, and collections from various points have been received occasionally ever since. This research was done from the entomological standpoint, did not include any experiments in transmission, and was intended to show what mosquitoes were present at a given station, and what diseases were coincidentally

* All the data given in this article, including the distribution of certain Anophelines, are taken from the records of army camps for 1918, and do not, in any instance, include any other records made by various authorities.—C. S. L.

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present, in this way serving as a suggestion where transmissions experiments might be undertaken.

In the Philippine Islands this research was, of course, pioneer work, while that done in the United States, Hawaii, Porto Rico, ets., has merely given added information to that already obtained from other sources. The epochal work in Cuba had already been done, and the wonderful work in Panama, covering so many sides of the subject and done by a separate body of men, is, of course, unique in many ways and complete in itself.

Before going into any details of this study in medical entomology it is perhaps well to state what is believed to be its relation to the coördinate branch, insect control, which, with the work in insect transmission, seems to form the completed triad.

As any control work necessarily means a knowledge of the conditions to be controlled, so, in regard to mosquitoes, the identification of the forms present at a given station (post or sub-post) should be a preliminary and concomitant study, preceding and accompanying the control work throughout its whole course; otherwise much unnecessary labor and expense are likely to be entailed.

First of all, it must be known whether the aim is merely a question of added comfort—or lessened discomfort—to the inhabitants of the locality, or whether increased health and efficiency are the definite results desired, and this, because the different groups of these insects vary considerably in breeding places, life habits, etc., and these are not the same, even in different species of the same group, so that some initiative knowledge as to the mosquitoes present is desirable before control work is begun, and a cotemporary study, running hand-in-hand with the control, should act as a sort of compass, indicating possible changes in methods and directions of attack, as shown by the species found to be present.

For this reason, and that the results might be recorded and correlated, and so made available for future use by the Medical Corps, this research was instituted.

The work for the camps, cantonments and fields in 1918 was initiated by Col. D. C. Howard, Medical Corps, U. S. Army, in charge, Division of Sanitation, Surgeon General's office, when he issued (March 21), "by direction of the Surgeon General," a letter to the division surgeons, stating, "It is desired that collections of mosquitoes be made in your camp and immediate vicinity," and directing that these collections be sent to "the Army Medical

Museum for a classification." Of course, the "desire" of the Surgeon General, like a "request" from the President, is equivalent to a command and carries the same weight.

The necessary instructions for taking and mailing the insects, the boxes for collections and wooden mailing boxes followed immediately, and these, with Col. Howard's letter, were sent to fifty-eight stations by March 25, and the newer camps, cantonments and fields, as they were created, were supplied as promptly as possible, the total amounting to seventy-eight posts.

These instructions were quite complete, and gave the period which a given collection was expected to cover, and the hours of collection. The killer of preference was indicated, and how it should be made, and suggestions as to other killers and traps given. The places from which collections might advantageously be made were stated, and specific directions as to the care necessary in taking and mailing the specimens and for the marking of the collecting (pill) and mailing boxes were also given.

These methods had been tried out for several years in the Philippine Island and the United States and proven successful. The choice of places where collections might wisely be taken was guided by the fact that disease-bearing mosquitoes are usually found in close connection with the living conditions of man, and sylvan mosquitoes are rarely connected with the transmission of disease. This may be illustrated by three significant collections from the Philippine Islands.

1. The best and most valuable collections of Anophelines ever received in this work, and which extended over a period of some months, were taken by Col. W. P. Chamberlain, M. C., at Camp Gregg, who tells me that he put the ward collections, mostly daytime, in the hands of reliable hospital corps men, but that by far the greater number of mosquitoes were taken at night, after the lamps were lit, when he personally collected from the outside of the screens of the porch of his quarters, and that he was able to take these insects in large numbers, because the sound of the mosquitoes buzzing on the screens was "like the rushing sound of distant waves."

2. The most interesting collection of sylvan mosquitoes, which included many new forms, were taken by Col. E. P. Whitmore, M. C., at Camp Stotsenberg. Col. Whitmore took collecting tubes, killer and vials, and went, about 2 p. m., into the jungle near the

camp, staying for two or three hours and sitting so quietly that "the wild hens paid no attention" to him, allowed the mosquitoes to settle and bite, and so secured rare specimens, some of which have never been duplicated. And this was in 1904!

The very few disease-bearers among them were marked, "Caught in the woods, hospital and quarters," and it is to be remembered that Col. Whitmore's collecting stations were not far from the camp.

3. I have myself, in the Philippines, often taken many Anophelines about 5 a. m., when the early morning sun was sending level rays into the houses and these mosquitoes were eagerly seeking the way out. In fact, no collections I ever made compared with these for the number of Anophelines. This does, not, however, mean that this is the only part of the daylight in which Anophelines may be taken. There have been too many excellent collections taken during midday to allow of such a statement, and the experience in some parts of Panama, where control of adults can only be effected by "hand-catching" would entirely disprove it.

I also found daylight collections, taken during the hours of the "siesta," in the partly darkened rooms, gave excellent results in securing *Stegomyia fasciata* and other house-infesting culicines.

The first response to Col. Howard's letter was quite general. During the summer, collections have been received from fifty-seven stations, but while the records from some stations show the collections to have been regular and without intermission, unfortunately they are much the minority. From one-third of the posts only one collection was received, and that in spite of various reminders, while from three no collections at all have come, and in one instance came the naive excuse that *after August 20* efforts had been made to secure specimens, but none had been obtained, and this in response to directions issued in March! At any one of these three stations the chances of there being no Anophelines during the season, still less of there being no mosquitoes during that time, are extremely small.

Part of the failure to send continuous collections was due to the fact that when the divisions were ordered to new stations the papers and records were taken with them, and the officers who succeeded in command of the posts were often entirely uninformed in the matter. This condition was not at once recognized at the Surgeon General's office, and there was some delay in sending duplicate instructions.

Only a general idea of the results can be given, but the records from the collections are interesting and may prove instructive.

From Camp Lewis, America Lake, Washington, were sent very brilliantly marked *Anopheles punctipennis,* and from Camp Custer, Battle Creek, Mich., came *Anopheles quadrimaculatus, Anopheles punctipennis* and *Anopheles walkeri,* but neither of these posts has record of any but "recurrent" cases of malaria. Further South some of the sections showed as many as four species of Anophelines, and three of them malaria carriers! It is needless to say malaria was present.

The distribution of Anophelines is also of some interest. Of these, *Anopheles punctipennis* is, so far as these collections go, much the most widespread of all, being taken in Washington, Michigan, the Western, Southwestern, the Southern border, the Gulf and Middle Western States and the Atlantic States so far North as collections have been made in connection with this work. It occurs in connection with each of the other Anophelines as well as alone.

*Anopheles quadrimaculatus, A. barberi,* and *A. stropos* are all taken in the Atlantic coast States, the first spreading over into other sections rather generally, but apparently not so widespread as *punctipennis,* and, either because it is present in less numbers or because it is more shy and less easily taken, is not sent in so frequently or in such large numbers as *punctipennis.* The other two species have definitely restricted localities, but *stropos* has been taken in Louisiana, and is not well known.

*Anopheles pseudopunctipennis* is confined to a comparatively small region in the Southwest, apparently not east of Texas nor north of San Francisco, but extends Southward, and is taken in large numbers in Panama.

*Anopheles crucians* shows a rather definite choice of localities, extending from the general vicinity of Washington and a little further north in the late summer, down the Atlantic Coast States (on the general coastal plain), in the Gulf States as far as Louisiana, and probably eastern Texas, and up the Mississippi River as far, at least, as Little Rock, Ark. The localities suggest some peculiar choice of breeding places, not yet sufficiently worked out to admit of definite statement, though Dr. Metz'* article, *"Anopheles crucians,* Habits of Larvæ and Adults," gives very interesting points which apparently lead along this line.

* Metz, C. W., Ph. D., Special Investigator, P. H. Report, Vol. 33, No. 49, Dec. 6, 1918.

The highest record of Anophelines at any one post in any one collection was eighty-four *Anopheles punctipennis* and sixteen *A. quadrimaculatus;* here also malaria was present. The next highest records are of thirty-four *Anopheles* in one collection, both of these being in camps in the United States. These records are, however, not to be considered as in any way reflecting on the sanitary officers at these places, because it is not always possible, even with the most careful and intelligent work, to control the breeding places in the camps, and our present knowledge precludes as unwise the assumption of a definite limit of flight from the extra-cantonment areas, which cannot perhaps be controlled.

The first specimen of *Stegomyia fasciata* from these camps was from Chattanooga, and it was rather quickly followed by specimens from Austin, San Antonio, Montgomery, Carlstrom Field, Florida, and Camp J. E. Johnston, Florida, the largest number coming from Camp Travis, San Antonio.

The routine methods at the Army Medical Museum have been, and are, the examination and determination of specimens, and the recording of each lot under its proper post. The records cover all points available; date and hour of collection, name and number of each species, the report as to insect-borne diseases present, and the average strength of the command, each being entered in successive columns on the same page, so that the whole story may be read at a glance and be quickly available for reference. A report of the findings of the collection is then sent to the camp surgeon and a memorandum sent to Col. Howard showing the posts, dates and in what numbers disease-bearing mosquitoes were taken. This method keeps the camp surgeon informed as to the kind of collections sent in and the Division of Sanitation of the whereabouts of the disease-bearing forms.

The lack of uniformity in the collecting has, of course, affected seriously the records, but, while not so complete as had been hoped for, it is believed they will prove of some value, not merely for the Medical Corps of the Army, but, in connection with the work of the Public Health Service, will serve in that general survey of our country when, for the health of the whole people, the extermination of malaria is taken up as thoroughly as the hookworm has been, and, while the work was done by and specifically for the army, this thought has always been in mind.

# TROPICAL RESOURCES AND HYGIENE.*

By D. RIVAS, PH. D., M. D.,
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While in general it may be said that the wealth of a country is judged by the natural resources it possesses, in a more concrete sense the development of such resources in reality has a more direct bearing upon that index. The vast resources of the tropics, for instance, are almost inexhaustible, and yet it is common knowledge that they have remained for generations practically unused, and only recently have been but merely touched, this being due in part to the prevalence of diseases which make these regions almost uninhabitable.

In the discussion of this subject a brief outline will be given, first concerning the resources of the tropics, and secondly the sanitation of those regions, with special reference to the intimate relationship which the one bears to the other.

It is beyond the scope of this article to deal in any great detail concerning the resources of the tropics; however, a general and brief resumé, drawn from the references given at the end, will suffice the purpose. For the same reason, the discussion will be limited to the resources of tropical America, with which the writer is better acquainted, although what applies to tropical America may be said to apply, more or less, to other tropical countries.

## TROPICAL RESOURCES.

In tropical America are found almost all the minerals, from coal and iron to silver, gold and precious stones, and also diamonds. The world largely depends upon South America for the supply of bismuth. Bolivia produces about 500 tons annually, with the mines of Brazil still unexploited. Chili produced over 40,000 tons of copper in 1914, and Peru over 33,000 in the same year.

Brazil possesses the largest known iron ore territory in the world, with a resource of 7,000,000,000 tons, and Chili has an annual output of almost 2,000,000 tons. The same country produced about 2,500,000 tons of nitre.

Brazil produced about $450,000 of gold and silver in 1914, Colombia over $7,000,000, and Mexico over $18,0000,000 in the same year, which is not in proportion to their large resources.

The almost inexhaustible oil resources of Mexico may be appreciated by the rapid development which this industry has reached

in a few years. From 220,000 barrels of oil produced in 1904, the production was over 3,000,000 in 1910, and over 21,000,000 in 1914, with a total output of 90,000,000 barrels from 1894 to 1914. As to other countries, Peru produced 47,000 barrels in 1896; it reached 500,000 in 1906, and over 1,000,000 barrels in 1914, with a total output of 14,000,000 from 1896 to 1914.

Oil is also produced in most tropical American countries, and in this connection mention may be made of the enormous resource of asphalt of Venezuela, which is still to be developed.

An idea as to the agricultural resources, one of the most important sources of wealth of tropical America, may be illustrated as follows: In 1913 Brazil produced 30,000,000 head of cattle, 7,000,000 horses, 3,000,000 mules and donkeys, 10,000,000 goats, 10,000,000 sheep and 18,000,000 hogs, with a total of 80,000,000 head for the year, or four head per capita. This branch of agriculture is also developed in other Latin-American countries.

The vast production of coffee by Brazil and tropical America is well known, as upon this coffee supply the world largely depends, and the same is true of rubber, etc.

A brief insight as to the forest resources of tropical America, and the potential wealth of these countries, may be illustrated by the number of square miles of forest in South America. Argentina has 231,000; Brazil, 1,500,000; Bolivia, 284,000; Chili, 59,000; Colombia, 240,000; Ecuador, 145,000; Guiana, 64,000; Paraguay, 84,000; Peru, 175,000, and Venezuela, 180,000, which makes a total of about 3,000,000 square miles of forest, divided as follows: Tropical hardwood, of which cedar is the most important, 1,613,000; Parana pine, 309,000; sub-tropical hardwood, 259,000; green heart mora forest, 241,000; mahogany, 84,000; Chilian pine, 96,000, and quebrachio, 404,000.

Very little is known concerning the commercial value of these vast forests, but the presence of utilizable woods in tropical forests, in addition to the rare woods, such as mahogany, dye woods, etc., and the present scarcity of lumber, makes it very probable that the world may be obliged to largely depend upon the tropical forests for the common timber supply.

The above brief outline of the natural resources of the tropics, the greater part of which still remains undeveloped, clearly shows the potentiality of wealth of these countries. Taking Brazil, for instance, with an area of 8,524,770 square kilometers, a little more

than the area of the United States of America, excluding Alaska, it has a population of only one-fifth of that country, or 20,000,000 inhabitants. This naturally leaves vast areas of undeveloped land, the price of which a few years ago varied from 25 cents to $2 per acre, and the same is true of other tropical countries.

## TROPICAL HYGIENE.

Various have been the views advanced from time to time as to the cause of neglect by which for generations the resources of tropical America have remained undeveloped. But why make theoretical speculations, when a more simple and logical one is evident, namely, *disease?*

That diseases are the most potent factors in determining the development of a country or a continent, and that upon them depends the achievement of any enterprise, admits of no doubt. We need only to mention the failure of the French Government to build the Panama Canal, because of the prevalence of disease in that zone, contrasted with the rapid and marvelous accomplishment of the Government of the United States of America after the sanitation of that region.

Disease, in fact, has directed the development and moulded the destiny of the human race and has been the real builder of empires. The diseases common to the Orient were an insurmountable barrier to Alexander and to the Crusaders. Cholera and other diseases of India have been the chief obstacles in the development and settlement of that country by Europeans, and the same is true of sleeping-sickness, malaria, etc., of central Africa. For the same reason the Anglo-Saxon and other races of northern Europe have made permanent settlement in North America, as well as the Latin race of southern Europe, of tropical and sub-tropical America. In other words, each race has followed the natural channels of emigration to similar or nearly corresponding surroundings. But above all, if Europe as a whole conquered America and made permanent settlement of this continent, it was because she was armed by the most powerful weapons of defense—the disease she imported—which rapidly spread among the natives with fatal consequences.

Smallpox, in 1507, exterminated whole tribes in the West Indies, a few years later depopulated San Domingo and destroyed 3,500,000 of people in Mexico (Hirsh), and the same happened in other countries. This was true also of other infectious and bacterial diseases,

but the protagonist in this evolutional tragedy was tubercle bacillus. Most bacterial diseases leave a certain degree of immunity, which is not the case with tuberculosis. The Caribes of the West Indies are nearly extinct. The Indians of North America are rapidly disappearing, as are also the aborigines of cold and temperate South America. The Indians could not in a few generations undergo such an evolution as to acquire an immunity against tuberculosis, which the European has accomplished by natural selection in thousands of years. This clearly shows that diseases, and not the sword, have been the real builder of empires.

But the era of the bacteria as builders of empires, as admirably described by Reid, is past. The time of discovering new continents and lands, of great conquest and migration of the human race, is closing, and diseases have spread all over the world. The era of speculation as to the cause of diseases is likewise closing. Bacteriology and parasitology have not only discovered the cause of diseases, but also the means of their prevention. Specific treatments have been discovered even for diseases of still unknown etiology, and hygiene and sanitation in general has become an exact science.

Of the common diseases of the tropics, such as leprosy, dysentery, trypanosomiasis, filariasis, ancylostomiasis, etc., and, the most important of all, malaria, the cause, mode of transmission, prevention and treatment are known. It is a common knowledge that these diseases are prevalent in those countries where hygienic and sanitary conditions are unfavorable, as is known, too, that they are an insurmountable barrier to the development of the vast resources of tropical America and the progress of the Latin-American countries.

With the instrumentality of modern hygiene and sanitation at our disposal for the prevention and eradication of these diseases, it is beyond any reasonable understanding why the sanitation of the tropics has not received due attention. The Rockefeller Foundation has done much in that direction, it is true, but much more, and still much more, the most essential is needed—the earnest cooperation of the respective governments of those countries.

The problem of sanitation of tropical America will be aided, to a large extent, by the fact that the greater part of the inhabitants of those countries, the *Latin-Americas,* represent a race admirably adapted to stand the unfavorable climatic conditions of those regions. The people are very healthy by nature, and to a large extent

immune against certain diseases, as may be shown by the components of its evolutional development.

The present inhabitants of the American continents, it is true, represent almost all the races of the world, but in general the greater part may be said to consist of the following extractions:

1. The Anglo-Saxons, derived chiefly from England and northern Europe.

2. The negroes, imported from Africa.

3. The Latins, derived from Spain, France, Portugal, Italy and some other countries of southern Europe.

4. The Indians, whatever their origin may have been, whether Asiatic or Phenicians, etc., at the time of the discovery of America, were found to have undergone sufficient evolutional development as to constitute a separate and distinct race, erroneously called Indians because of the belief of Columbus to have discovered a new route to India, and not a new continent, America. The Indians, in an exact sense, are Americans in the same sense that the negroes are Africans; the Jews, Hebrews; the Asiatic, Mongolians; or the Europeans, Caucasians.

5. The Latin-Americans, derived from the intermarriage of the Latins with the native Americans, may properly be regarded as a distinct type and as the youngest of the human races, represented at present, perhaps, by no less than 100,000,000 people of the tropical and sub-tropical Americas. To regard the Latin-Americans as Europeans or Latins would be as erroneous as to regard them as Americans or Indians, because they really represent an amalgamation of the Latins with the Americans, in the sense that the Anglo-Saxon is an amalgamation of the Angles with the Saxons.

The anthropological and biological importance in the evolutional development of the Latin-American race, from a medical point of view, is that, by having derived from the Latins more or less resistance, are naturally immune against tuberculosis and other European diseases, and, from the native American, more or less resistance, are naturally immune against malaria and other tropical diseases, the race has inherited the strong characteristics of the two, and consequently is better fitted to stand unfavorable climatic and sanitary conditions. The Latin-Americans, therefore, by nature are more resistant to diseases in general—a fact which undoubtedly will greatly aid in the sanitation of tropical and sub-tropical America, where the greater part of this population is found.

Proof of this natural resistance is found in the fact that the Latin-Americans have survived and propagated in the tropics under unfavorable sanitary conditions, and are likewise adaptable to the life in the cold and temperate regions. In contrast to this, we know how susceptible the native Americans still are to tuberculosis when living in association with Europeans, as are the Europeans to the diseases of the tropics.

But this does not imply that life for the inhabitant of northern regions is an impossibility in the tropics—not in the least, because this would amount to saying that the Africans cannot live in northern climates, which is not the case, as over 10,000,000 of them are in North America alone. The advancement in modern sanitation has rendered the earth safe to live in whatever region we may choose. What is still lacking is sufficient sanitation and appropriate training and better knowledge among the laity in general concerning the causes of diseases, their modes of transmission and how to prevent them. It is the neglect of these underlying principles—ignorance, in other words—which is responsible for the sad consequences too often seen and which could easily be avoided among the inhabitants of northern regions who carelessly adventure their future in tropical countries.

In this connection it is of primary importance that those who desire to settle in the tropics, or undertake some enterprise in those countries, should receive, first, appropriate instructions in bacteriology, hygiene and sanitation, parasitology and tropical medicine. and also Spanish or Portuguese.

This instruction may be taken in one or two semesters in any of our universities which offer such courses. The courses should consist of didactic lectures and demonstrations in the laboratory. The student should become proficient in the underlying principles of hygiene and sanitation before receiving a certificate or diploma, and only then should be regarded as a candidate for a position, of whatever kind it may be, in the tropics.

At the same time, the writer believes it is an imperative necessity and of vital importance that the same instruction should be given, not only in all universities and colleges, but also in the schools of all tropical and sub-tropical America. The respective governments of these countries should awake to the requirements of the age by directing their efforts toward the sanitation of the tropics. "Health first," and only then can the almost inexhaustible re-

sources of the tropics be developed, and with it the progress and prosperity of tropical and sub-tropical America and of the Americans as a whole.

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## AMERICAN SOCIETY OF TROPICAL MEDICINE

### COMMUNICATION.

*To the Members of the American Society of Tropical Medicine:*

During the war the work of the Society, like many other activities, has been disorganized. No annual meeting was held in 1918, the publications of the Society have not been altogether satisfactory, dues have remained unpaid, and we are somewhat in debt. There is now need for reorganization, and it becomes my duty, as president, to call on all members for assistance in making the Society the rallying point for Americans who are interested in tropical medicine.

It is hardly necessary to say that there is a definite place for the Society to fill. The history of our country shows that many of our citizens have been and are being subjected to diseases of warm climates, and the future will no doubt bring more responsibilities of the same kind. Many of the problems of tropical medicine have been successfully met by American medical men. There is a distinct need for a representative national organization, with all its advantages of mutual stimulus and concerted action. The Society, which has already worked fifteen years in the field, is the logical means to this end.

The main features of the Society have been and should be (1) to provide for an annual professional meeting for the benefit of those who can attend; (2) to provide for publications to keep all mem-

bers in touch with each other's work. In order to accomplish this work, a certain amount of money is, of course, necessary, which must be made up from dues. During the changes of the war many members have probably failed to receive notices of their dues, or at least have not paid them. At the last meeting in June, at Atlantic City, the dues were fixed at $5, and the treasurer was instructed to drop the names of members who, after notice, remained more than three years in arrears. It was also voted that the dues of those who entered the service from civil life should be remitteted on request. Arrangements were also made looking to a satisfactory form of publication. The Society is under financial and moral obligations to the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL for the present year, but a change will be made in 1920 to annual transactions or to occasional bulletins or to a special journal. The consensus of the opinion of the Council was that it would be better to have a smaller number of really active workers as members rather than a large membership with only remote interest.

Under these circumstances, I ask each member to reconsider his connection with the Society. Those who have supported it in the past I ask to take a fresh hold; those who wish to make it a useful and active Society I ask to contribute to the program and to meet at New Orleans next year if possible; those who for any reason wish to withdraw, I ask to do so now, that we may know whom to count on for support. My policy will be to develop the national spirit in the Society, to cultivate cordial relations with workers of other nations through corresponding membership, and to include the results, both of investigation and of application, in the program of the annual meeting and in the publications of the Society.

Any suggestions and criticisms looking to the improvement of the Society will be welcome.

*"Take up the white man's burden."*

H. J. NICHOLS.

Army Medical School, Washington, D. C., July 4, 1919.

## NEWS AND COMMENT

NEW DEAN SCHOOL OF MEDICINE, UNIVERSITY OF TENNESSEE.—Dr. F. D. Bristol, formerly secretary of the State Board of Health of Maine, has been appointed dean of the School of Medicine, University of Tennessee, succeeding Dr. A. H. Wittenborg.

AT A RECENT MEETING OF THE COUNCIL ON MEDICAL EDUCATION Dr. Arthur D. Bevan was elected chairman. Other members of the Council are: Drs. Robert C. Coffey, Portland, Ore.; William D. Haggard, Nashville, Tenn.; William Pepper, Philadelphia, Isadore Dyer, New Orleans; N. P. Colwell, secretary, Chicago.

ADDITIONAL RECIPROCAL RELATIONS.—The Indiana State Board of Medical Registration and Examination recently added Alabama, Georgia and Washington to its list of reciprocal relations. Previously relations existed with Arkansas, Colorado, District of Columbia, Illinois, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, Utah, Vermont, Virginia, West Virginia, Wisconsin and Wyoming. This makes thirty-four States with which Indiana now reciprocates in medical licensure.

THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS will hold their thirty-second annual meeting in Cincinnati, September 15 to 17. Dr. Magnus A. Tate is chairman of the local committee of arrangements.

HONOR CONFERRED ON SECRETARY OF COUNCIL OF PHARMACY AND CHEMISTRY.—The degree of Master of Pharmacy was conferred on Prof. William A. Puckner, Chicago, secretary of the Council of Pharmacy and Chemistry of the American Medical Association, by the Philadelphia College of Pharmacy, in connection with its ninety-eighth annual commencement.

THE ASSOCIATION OF AMERICAN PHYSICIANS, at its annual meeting in Atlantic City, June 16 and 17, elected the following officers for 1919: President, Dr. Herman M. Biggs, New York; vice-president, Dr. William S. Thayer, Baltimore; secretary, Dr. Thomas McCrae, Philadelphia; recorder, Dr. Thomas R. Boggs, Baltimore;

treasurer, Dr. Joseph A. Capps, Chicago, and councilor, Dr. Lewis A. Conner, New York.

TUBERCULOSIS FUNDS AT MADRID.—The annual flower day held at Madrid for the purpose of collecting funds to care for tuberculosis patients resulted in the collection of approximately $32,000. This is the largest amount collected since this custom was inaugurated six years ago. It is estimated that 50,000 deaths from tuberculosis occur annually in Spain.

CHILD WELFARE IN FRANCE.—The officials of the Department of the Seine Inférieur, with a population of about 200,000, have taken over and provided for the permanent maintenance of an organization for the protection of mothers and children, originally installed by the American Red Cross. It will include a model clinic for children, parental clinic for prospective mothers, a dental clinic, a school for social service workers, courses for midwives, school teachers and students; a maternity hospital, with a capacity of 1,600; a school for children accompanying prospective mothers, a children's hospital with 100 beds, and a model dairy farm. This work has been in charge of Dr. Walter R. Ramsey, of St. Paul, assistant professor of pediatrics in the University of Minnesota Medical School.

MEDICAL ASSISTANCE TO SIBERIA.—Drugs, clothing, foodstuffs and miscellaneous supplies valued at more than $5,000,000 have been distributed over Siberia by the American Red Cross within the past nine months. The organization is operating at present nine hospitals, with a total capacity of 4,000. The relief work of Siberia has been in charge of Dr. R. B. Tuesler, formerly in charge of St. Luke's Hospital, Tokyo, Japan. A hospital for typhus fever is being operated at Petropavlosk, and it is stated that the spread of typhus fever in this territory has been checked to a great extent by the institution of bathing and disinfecting stations along the railway line. At one of these stations baths were provided for 35,000 persons, clothing disinfected and new garments supplied wherever necessary.

THE AMERICAN RED CROSS has opened one of the biggest hospitals at Cheliabinsk, Siberia. Dr. Henry W. Newman has been placed in charge.

DEBARKATION HOSPITAL NO. 3, NEW YORK, handled more than 37,000 patients since its establishment, November last. The medical staff numbered 900, and nearly 150 Red Cross workers handled the reception of visitors and the entertainment of the men. It has been estimated that it cost $6 per minute to run the hospital, and was in charge of Lieut. Col. William J. Monaghan. The institution is now being evacuated.

ACADEMY BEQUEST.—By the will of Dr. Abraham Jacobi, who died July 10, $5,000 is left to the New York Academy of Medicine.

ROCKEFELLER INSTITUTE ANNOUNCES NEW APPOINTMENTS.—The board of scientific directors of the Rockefeller Institute for Medical Research announces new appointments and promotions as follows: Dr. Harold L. Amos, heretofore associate in pathology and bacteriology, has been appointed an associate member; Dr. Oswald T. Avery, hitherto an associate in medicine, has also been made an associate member; Miss Clara J. Lynch and Dr. Waro Nakahara appointed assistants in pathology and bacteriology. New appointments are: Dr. Francis G. Blake, associate in medicine; Dr. Raymond G. Hussey, associate in pathology and bacteriology; Dr. J. Harold Austin, assistant in medicine; Dr. Albert H. Ebeling, assistant in experimental medicine; Dr. Ferdinand H. Haessler, assistant in pathology and bacteriology; Dr. Thorston Ingvaldsen, assistant in chemistry; Drs. Charles W. Barrow, J. Jay Keegan and Philip D. McMaster, fellows in bacteriology and pathology.

MEDICAL SCHOOL BUILDING TO BE ERECTED.—The building for the Kansas University Medical School, for which an appropriation of $200,000 was made by the recent legislature, will be erected if the city of Rosedale furnishes additional ground needed, the value of which is $60,000.

JACOBI MEMORIAL HOSPITAL.—A campaign committee has completed plans to raise sufficient funds for the erection of an Abraham Jacobi Memorial Hospital in New York City. The active campaign will not begin until November. Dr. S. Robert Schultz has been appointed executive director of the campaign and has issued a call for volunteer workers.

ROSA SPANG FOUNDATION.—Under the will of Mrs. Rosa E. Spang, of New York City, more than $1,000,000 has been left for

the relief of the poverty and distress of children and babies who are in want, either through abandonment or the death of their parents. The will provides that the foundation shall be known as the Rosa Spang Foundation, and its chief work will be to select children sent to orphanages and homes and make provision for their education and instruction. Former Attorney General Wickersham, Col. Michael Friedsam and Dr. Henry Dwight Chapin are named as directors and executors of the fund.

THE LANE MEDICAL LECTURES, which are held bi-annually at the Stanford University Medical School, will this year be delivered by Dr. Alonzo E. Taylor, professor of physiologic chemistry at the University of Pennsylvania. Dr. Taylor has been representative of the Secretary of Agriculture on the War Trade Board for the past two years, and his lectures will deal with the results of his nutritional and medical survery of European food conditions. The date of the lectures has not been decided on, but will be about December 12, 1919.

ST. LUKE'S HOSPITAL BEQUEST.—The will of Harriet Emily Ogden, of Elizabeth, N. J., leaves a bequest to St. Luke's Hospital of $7,000 for the Aaron Ogden bed and $5,000 for the Robert Travers bed.

TROPICAL MEDICINE FLOATING SCHOOL.—The proposal of Dr. Louis Sambon, at the Royal Society of Medicine, for the establishment of an interallied floating school of tropical medicine for investigation, scholastic and hygienic purposes, has met with a cordial reception among British medical men. His idea is to equip a floating laboratory with a staff of experts from the various nations and complete laboratories for the study of the cause and prevention of tropical diseases wherever they exist.

PASTEUR INSTITUTE IN NICARAGUA.—A Pasteur Institute was recently established at Managua by the Nicaraguan Government.

SOCIAL HYGIENE BOARD TO BE CONTINUED.—Approximately $1,000,000 has been included by Congress in the Sundry Civil Bill for the continuation of the Interdepartmental Social Hygiene Board created in 1918 to prevent the spread and mitigate the danger of venereal diseases. The statement of the work accomplished shows the closing of 124 "red-light" districts in America, the detention

and care of 30,000 delinquent females, special study of the causes of delinquency, enforcement of laws and ordinances relating to venereal diseases, especially in communities adjoining military and naval camps, and the greatest reduction in venereal disease rates ever recorded in the army. It also secured legislation with the States and the establishment of divisions of venereal diseases in various State boards of health.

THE UNIVERSITY OF MICHIGAN will establish an experimental garden of medicinal plants based on plans submitted by Dr. Henry Kraemer, dean of the College of Pharmacy. Frederick Stearns & Co., of Detroit, have promised the financial support necessary to carry on the work. As soon as the experiments prove that certain medicinal plants can be grown profitably, drug farms will be established.

AMERICANS TO FOUND LONDON HOSPITAL.—As an outgrowth of the war, the first steps have been taken towards the establishment of an American hospital in London. It will be open for the medical and surgical treatment of patients of all classes, regardless of creed or nationality, and it is hoped to make the hospital the headquarters of American medicine in Europe. It is to be founded by American residents of London, and it is desired to continue the close relations which existed between British and American medical men and to provide an opportunity for graduates of other countries. The medical committee for Great Britain consists of Sir William Osler, Sir Arbuthnot Lane, Sir Humphrey Rolleston, Sir John Bland-Sutton, J. Y. W. MacAllister and Philip Franklin. The medical committee for the United States consists of Drs. George W. Crile, W. J. Mayo, Albert J. Ochsner, Rudolph Matas and Franklin Martin.

CHARITABLE BEQUESTS.—By the will of the late Oliver B. Wood, of Camden, N. J., $30,000 is left to Cooper Hospital for the endowment of five free beds, and the sum of $5,000 to the West Jersey Homeopathic Hospital.

The will of Warren Snyder bequeaths $10,000 each to the Hudson Hospital, Columbia County, New York, Hospital, and the Brooklyn Home for Consumptives, and to the Long Island College Hospital, for hospital purposes, $5,000.

Bequests by the will of the late Sarah A. C. Lloyd, of Philadelphia, are made as follows: Twenty-five thousand dollars each to

the Children's Country Week Association, the Children's Homeopathic Hospital, the Children's Aid Society and the Women's Homeopathic Hospital.

WASHINGTON MEDICAL ANNALS announces the removal of its office from 2114 Eighteenth street, N. W., to 1115 Clifton street, N. W.

PERSONALS.—Dr. John Smyth, recently returned from service abroad, has opened offices at 724 Baronne street. Practice limited to surgery.

Among the Louisiana physicians who have returned from service since our last list are the following: Drs. W. M. Perkins, E. L. King, W. E. Barker, Jr., J. L. Locascio, D. J. Murphy, A. L. Weil, J. A. Lanford, E. A. Lines, J. R. D'Aunoy, W. G. Milholland, D. N. Silverman, B. B. Davis, D. R. Heninger, New Orleans; J. M. Bodenheimer, J. C. Willis, Jr., A. G. Heath, A. B. Nelson, W. H. Billingsley, Shreveport; D. D. Gill, Gilbert; J. R. Frazer, Merryville; A. A. Landry, Plaquemine; V. J. Funderburk, Vixen; T. M. Brister, Bogalusa; J. L. Kelly, Melrose; L. J. Williams, Melville; J. C. Sartor, Rayville; G. G. Whitley, Ward; C. A. Lorio, Lakeland; E. E. Archibald, Alberta; J. A. Wilkinson, Homer; E. M. Levy, Jackson; D. H. James, Truxno.

REMOVALS.—Dr. B. C. Blake, from Alexandria, La., to Trout, La. Dr. T. F. Gross, from Orr, Okla., to Lindsay, Okla.

MARRIED.—On July 23, 1919, at Brandon, Miss., Dr. Charles J. Foulks, of Roseland, La., to Miss Bessie McCorkill, of Brandon, Miss.

DIED.—On July 22, 1919, Dr. Gaston A. Hebert, of Hot Springs, Ark.

## PUBLICATIONS RECEIVED

**W. B. SAUNDERS COMPANY,** Philadelphia and London, 1919.

**The Medical Clinics of North America.** May, 1919.

**WILLIAM WOOD & CO.,** New York, 1919.

**The International Medical Manual,** 1919.

**The Pituitary,** by W. Blair Bell.

**LEA & FEBIGER,** Philadelphia and New York, 1919.

**Hygiene and Public Health,** by George M. Price, M. D.

**The Principles of Nursing,** by Charlotte A. Brown, R. N.

**Rules for Recovery from Tuberculosis,** by Lawrason Brown, M. D.

**Rœntgen Interpretation,** by George W. Holmes, M. D., and Howard E. Ruggles, M. D.

**Pulmonary Tuberculosis,** by Maurice Fishberg, M. D.

**Text-Book of Urology in Men, Women and Children,** by Victor Cox Pederson, A. M., M. D., F. A. C. S.

**GOVERNMENT PRINTING OFFICE,** Washington, D. C., 1919.

**Public Health Reports.** Vol. 34, Nos. 26, 27, 28.

**MISCELLANEOUS:**

**Report of the Public Health Department of the Panama Canal.** October, November, December, 1918. (The Panama Canal Press, Mount Hope, C. Z., 1919.)

**De l'Orthopédie Instrumentale,** by Dr. Gabriel Bidou, Paris, 1919.

**Transactions of the American Pediatric Society.** Vol. 30, 1918.

**The Rockefeller Foundation Review for 1918.**

**REPRINTS.**

**Practical Congenital Syphilis; Three Cases of Unusual Congenital Origin; Vaccine Therapy—The Most Effective and Rational Method of Treating Whooping-Cough; Tertian Malaria in Two Infants Under Two Months of Age,** by Charles J. Bloom, M. D.

**Impressions of Dr. S. E. Earp, Chairman Medical Advisory Board No. 56, Division No. 1, Indiana** (Indianapolis).

**Genital Defects and Venereal Diseases Among the Porto Rican Draft Troops,** by Herman Goodman, B. S., M. D.

## MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans for July, 1919.

| *CAUSE.* | *White.* | *Colored.* | *Total.* |
|---|---|---|---|
| Typhoid Fever | 7 | ---- | 7 |
| Intermittent Fever (Malarial Cachexia) | 1 | 2 | 3 |
| Smallpox | 1 | ---- | 1 |
| Measles | ---- | ---- | ---- |
| Scarlet Fever | ---- | ---- | ---- |
| Whooping Cough | ---- | ---- | ---- |
| Diphtheria and Croup | 1 | 1 | 2 |
| Syphilis | 5 | 4 | 9 |
| Cholera Nostras | ---- | ---- | ---- |
| Pyemia and Septicemia | ---- | ---- | ---- |
| Tuberculosis | 35 | 40 | 75 |
| Cancer | 30 | 14 | 44 |
| Rheumatism and Gout | 1 | ---- | 1 |
| Diabetes | 3 | ---- | 3 |
| Alcoholism | ---- | ---- | ---- |
| Encephalitis and Meningitis | 1 | 2 | 3 |
| Locomotor Ataxia | 1 | 1 | 2 |
| Congestion, Hemorrhage and Softening of Brain | 18 | 9 | 27 |
| Paralysis | 4 | ---- | 4 |
| Convulsions of Infancy | ---- | ---- | ---- |
| Other Diseases of Infancy | ---- | ---- | ---- |
| Tetanus | 1 | 1 | 2 |
| Other Nervous Diseases | 2 | ---- | 2 |
| Heart Diseases | 64 | 29 | 93 |
| Bronchitis | 2 | ---- | 2 |
| Pneumonia and Broncho-Pneumonia | 17 | 16 | 33 |
| Other Respiratory Diseases | 1 | ---- | 1 |
| Ulcer of Stomach | ---- | ---- | ---- |
| Other Diseases of the Stomach | 1 | 1 | 2 |
| Diarrhea, Dysentery and Enteritis | 16 | 14 | 30 |
| Hernia, Intestinal Obstruction | 5 | 2 | 7 |
| Cirrhosis of Liver | 5 | 6 | 11 |
| Other Diseases of the Liver | 2 | 3 | 5 |
| Simple Peritonitis | ---- | ---- | ---- |
| Appendicitis | 6 | 2 | 8 |
| Bright's Disease | 17 | 13 | 30 |
| Other Genito-Urinary Diseases | 10 | 12 | 22 |
| Puerperal Diseases | 7 | 1 | 8 |
| Senile Debility | 1 | ---- | 1 |
| Suicide | 5 | 2 | 7 |
| Injuries | 20 | 14 | 34 |
| All Other Causes | 33 | 24 | 57 |
| TOTAL | 323 | 213 | 536 |

Still-born Children—White, 19; colored, 23; total, 42.

Population of City (estimated)—White, 283,000; colored, 106,000; total, 389,000.

Death Rate per 1,000 per Annum for Month—White, 13.70; colored, 24.11; total, 15.53. Non-residents excluded, 13.63.

### METEOROLOGIC SUMMARY (U. S. Weather Bureau).

Mean atmospheric pressure..... 30.01
Mean temperature..... 83
Total precipitation..... 7.62 inches
Prevailing direction of wind, west.